Medical TIMES

THE JOURNAL OF GENERAL PRACTICE

VOL. 82 FEBRUARY 1954 NO. 2

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SYRINGES

When you use B-D MULTIFIT Syringes, you get

- **ease and speed of assembly—less labor—**
  no matching of parts
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  unground molded barrel is more resistant to wear and breakage.

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2cc., 5cc. and 10cc.—LUER-LOK™ or Metal Luer tip.

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IS CRYSTALLINE DIGITOXIN

● . . . the only digitalis material that gives you *strict* control over the intensity of its action when you give it by mouth.

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You can depend upon an oral dose to produce the same effect as if it were given by vein. None of its activity is lost through imperfect or variable utilization.

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Supplied: Tablets of 0.2 mg. (white); 0.15 mg. (yellow); 0.1 mg. (pink); 0.05 mg. (orange)

Wyeth®

Philadelphia 2, Pa.

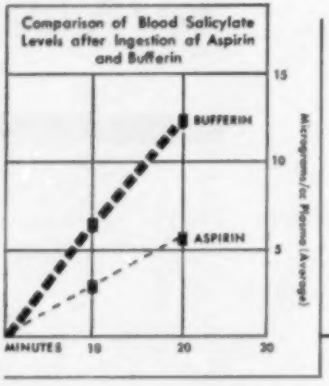
CONTENTS

Medical Times is published monthly by Romaine Pierson Publishers, Inc., with publication offices at 34 North Crystal Street, East Stroudsburg, Pa. Executive, advertising and editorial offices at 676 Northern Boulevard, Great Neck, L. I., N. Y. Acceptance under section 34.64 P.L. and R., authorized February 23, 1950 at East Stroudsburg, Pa.

Faster Pain Relief with BUFFERIN®

1 ACTS TWICE AS FAST AS ASPIRIN

The antacids in Bufferin speed its pain-relieving ingredients through the stomach and into the blood stream. Actual chemical determinations show that within ten minutes after Bufferin is ingested blood salicylate levels are higher than those attained by aspirin in twice this time.[1]



2 DOES NOT UPSET THE STOMACH

Bufferin's antacid ingredients protect the stomach against aspirin irritation. This has been clinically demonstrated on hundreds of patients.

in usual doses

In a series of 238 cases, 22 had a history of gastric distress due to aspirin but only one reported any distress after taking 2 Bufferin tablets (equivalent to 10 grains of aspirin).[1]

in large doses

In a recent study group, 1006 patients received, over a 24 hour period, 12 Bufferin tablets (equivalent to 60 grains of aspirin). Although 72 had a history of being sensitive to aspirin, only 18 reported any gastric side-effect with Bufferin.[2]

1. Effect of Buffering Agents on Absorption of Acetylsalicylic Acid. J. Am. Pharm. Assoc., Sc. Ed. 39:21, Jan. 1950
2. Gastric Tolerance for Aspirin and Buffered Aspirin. Ind. Med. 20:480, Oct. 1951

INDICATIONS: Simple headaches, neuralgias, dysmenorrhea, muscular aches and pains, discomfort of colds and minor injuries. Particularly useful when gastric hyperacidity is a complication. Useful for relieving pain in the treatment of arthritis.

EACH BUFFERIN TABLET contains 5 grains of acetylsalicylic acid, together with optimum amounts of the antacids aluminum glycinate and magnesium carbonate.

AVAILABLE in vials of 12 and 36 tablets and in bottles of 100. Tablets scored for divided dosage.

Bristol-Myers Co., 19 West 50 St., New York 20, N. Y.

CONTENTS

for
weight
reduction
based
on
metabolic
control

____focus on the liver

Increased lipotropic demands for converting fat into energy may intensify liver damage already present in overweight patients.* The first comprehensive control for obesity, OBOLIP controls appetite *and* provides the lipotropics needed to correct liver dysfunction, expedite fat transport and promote metabolic burning.

OBOLIP

Each capsule contains:

phenobarbital	16 mg.
WARNING: may be habit-forming	
d-amphetamine sulfate	5 mg.
choline bitartrate	400 mg.
dl-methionine	150 mg.
vitamin B_{12} U.S.P.	4 mcg.
methyl cellulose	160 mg.

Dosage: One capsule three times daily, with a glass of water one-half hour before meals.

Prescribe OBOLIP *in bottles of 50 capsules.*

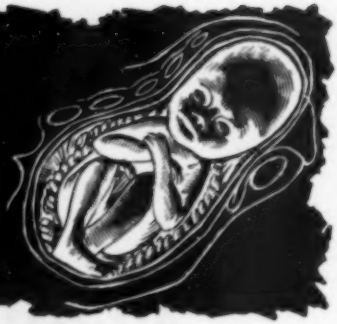
*Zelman, S.: Arch. Int. Med. 90:141, 1952.

Lakeside Laboratories INC • MILWAUKEE 1, WISCONSIN

MEDICAL BOOK NEWS

96% BIRTH RATE

with des or desPLEX



TWO DEPENDABLE PRODUCTS FOR LIFE *in* THREATENED ABORTION, HABITUAL ABORTION AND PREMATURE LABOR

des, the only micronized, triple crystallized (Grant Process) Stilbestrol (U.S.P.) Tablets—used in the treatment of pregnant women, with a history of one, two or more abortions—***averaged 96% normal live babies delivered***[1,2,3].

After extensive clinical experience with des, Karnaky[1], Gitman and Koplowitz[2] and Ross[3] as well as countless other clinicians wholeheartedly endorse the sound therapeutic necessity for the use of des in threatened abortion, habitual abortion and premature labor.

In a most recent publication, Karnaky has demonstrated that des, in massive doses (275 milligrams daily) provides optimum therapeutic results with maximum safety.

des—25 milligram tablets—highly micronized, triple crystallized (Grant Process) Stilbestrol (U.S.P.)—dissolve within a few seconds and are uniformly absorbed into the blood stream. Available in containers of 30 and 100 tablets.

new desPLEX—vitaminized, micronized Stilbestrol (U.S.P.). Border-line deficiency of B complex, especially Folic Acid, may sometimes prevent maximum utilization of estrogens. Histories of such cases indicate that the woman had difficulty in metabolizing endogenous or ingested estrogens. Not unusually, mild to severe nausea and vomiting is symptomatic. For additional support, when indicated, prescribe desPLEX, micronized Stilbestrol (U.S.P.), fortified with vitamin C plus B complex, including Folic Acid and B_{12}.

Karnaky[4] and Javert[5] agree that C and B complex vitamins and Folic Acid are necessary for the normal physiological metabolism of estrogens. Jailer[6] further substantiates that a border-line deficiency of Folic Acid may result in premature separation of the placenta. *That is why desPLEX is the product of choice.*

desPLEX—25 milligram tablets—vitaminized, micronized, triple crystallized (Grant Process) Stilbestrol (U.S.P.) fortified with C and B complex vitamins, particularly Folic Acid. Available in containers of 30 and 100 tablets.

For further information, write:

Medical Director

GRANT CHEMICAL COMPANY, INC.

121 East 24th Street

New York 10, N. Y.

●

References:

1. Karnaky, K. J., Amer. J. Obst. & Gyn. 53:312, 1947. 2. Gitman, L. and Koplowitz, A., New York State J. Med. 50:2823, 1950. 3. Ross, J. S., N. Nat. M.A. 43:20, 1951. 4. Karnaky, Karl J., Surg., Gyn. & Obst. 91:617, 1950. 5. Javert, C. T., New York State J. Med. 48:2595, 1948. 6. Jailer, J. W., J. Clin. Endrocinol. 9:557, 1949.

Medical TIMES

THE JOURNAL OF GENERAL PRACTICE

Incorporating the Long Island Medical Journal and Western Medical Times

CONTRIBUTIONS Exclusive Publication: Articles are accepted for publication with the understanding that they are contributed solely to this publication, are of practical value to the general practitioner and do not contain references to drugs, synthetic or otherwise, except under the following conditions: 1. The chemical and not the trade name must be used, provided that no obscurity results and scientific purpose is not badly served. 2. The substance must not stand disapproved in the American Medical Association's annual publication, New and Nonofficial Remedies. When possible, two copies of manuscript should be submitted. Drawings or photographs are especially desired and the publishers will have half tones or line cuts made without expense to the authors. Reprints will be supplied authors below cost.

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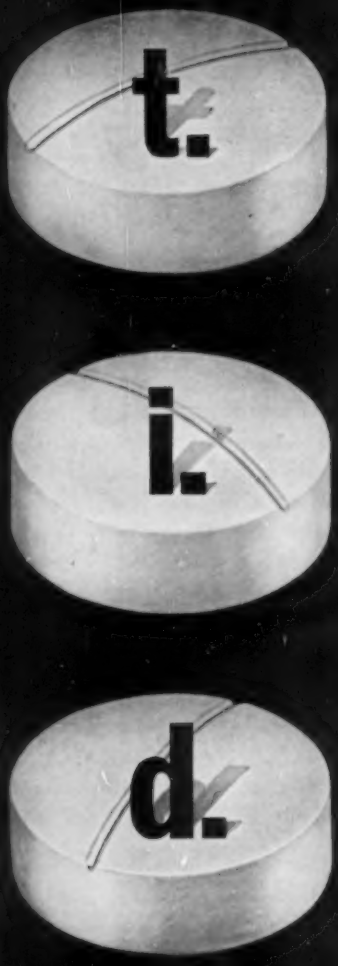
1st choice for oral penicillin therapy

just 1 or 2 tablets



Pentids

Squibb 200,000 Unit Penicillin G Potassium Tablets

SQUIBB

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IN THE COMMON COLD...

Prompt Symptomatic Relief with

Multihist + APC

MULTIPLE ANTIHISTAMINE •
ANALGESIC • ANTIPYRETIC

Taken at the onset of symptoms, Multihist + APC quickly suppresses the troublesome rhinorrhea of the common cold and relieves such general symptoms as headache, backache, and other discomfort. Each capsule provides 15 mg. of the Multihist combination (5 mg. each of Pyrilamine maleate, Prophenpyridamine maleate, and Phenyltoloxamine dihydrogen citrate) together with aspirin 3½ gr., phenacetin 2½ gr., and caffeine ½ gr. Because each antihistamine is provided in an amount virtually incapable of producing drowsiness or lethargy, the incidence of side effects is greatly reduced. Average dose, 2 capsules initially, followed by 1 capsule at 4-hour intervals. Available on prescription through all pharmacies.

SMITH-DORSEY
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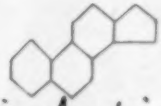
multiple antihistamine therapy means reduced incidence of side effects

cortisone + SCHERING = Cortogen

the symbol SCHERING denotes leadership in steroid hormone  research and manufacture -- including Cortogen in the most useful clinical forms. For systemic therapy, use Cortogen tablets  or injection  . For eye  disorders use Cortogen ophthalmic suspension -- sterile  . The Schering seal  appears on each tablet and package -- your assurance of quality.

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Ophthalmic Suspension—*Sterile*, 0.5% and 2.5%, 5 cc. dropper bottles.

Schering CORPORATION · BLOOMFIELD, NEW JERSEY
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CORTOGEN

SCHERING

PHOTOGRAPH BY PAUL RADKAI

"All showed prompt clinical improvement"[1]

TABLETS

REMANDEN®

PENICILLIN WITH PROBENECID—THE NEW ORAL "LONGER-ACTING" PENICILLIN

Plasma levels with *oral* REMANDEN compare favorably with those obtained by injection of procaine penicillin. In a group of 20 children treated with REMANDEN, three hours after administration average penicillin plasma level was ten times higher than minimum inhibitory level for beta-hemolytic streptococcus found in scarlet fever.[1]

Quick information: 100,000 or 250,000 units of crystalline penicillin G and 0.25 Gm. of probenecid (Benemid®) per tablet. *Adults*—4 REMANDEN—100 tablets initially, then 2 every 6 or 8 hours. *Children*—usually 2 to 4 REMANDEN—100 tablets daily.

Reference: 1. J. Pediat. 42:292 (March) 1953.

Off the Record . . .

True Stories From Our Readers

Each incident described has been contributed by one of our readers. Contributions describing actual and unusual happenings in your practice are welcome. For obvious reasons only your initials will be published. An imported German apothecary jar will be sent in appreciation for each accepted contribution.

Turn the Mattress, Please

Many amusing and disconcerting experiences with the Spanish language initiated me into the Southwest. One night I was called to attend a woman in a small Mexican shack. On arrival, I found that I was lucky; one of the women present spoke a smattering of English. My question as to what bothered the patient brought the response, "Thees lady, her mattress is upside down."

This obviously called for diagnostic ability, so I carefully inspected the bed and coverings and tried to get some of the history. "The other El Doctor, he turn it over for her won month ago, and she very happy until now," was all I could get.

"Get her out of bed then, and I'll turn it over for her, too," I finally blurted out when nothing else could be learned.

"But Doctor, she cannot get up. The other won, he turn it over while she still in bed" complicated the procedure.

In my hip pocket was a small dictionary which I had found of aid before, and this finally solved my problem when I found in the Spanish section "Matriz, ——— uterus or womb."

With red face I gave up my bed-making attempts and replaced her acutely retroflexed uterus.

J. T. O., M.D.
Casa Grande, Ariz.

Freedom of Choice

Approximately a year ago I delivered a lady whose youngest child was a boy of six. She told him that he was going to have a younger brother or sister. He strongly wanted a brother to play with, but after his mother explained to him that they had to take what they got and couldn't order a particular sex, he became reconciled to it.

After thinking it over for a few minutes he came up with the statement, "Well, I guess it's O.K. to get a girl, but be sure and don't get a black one, because I don't think Daddy would like it."

B. F. J., M.D.
Bakerfield, Calif.

Why Doctor!

While doing a pelvic examination recently the question as usual arose on the following point:

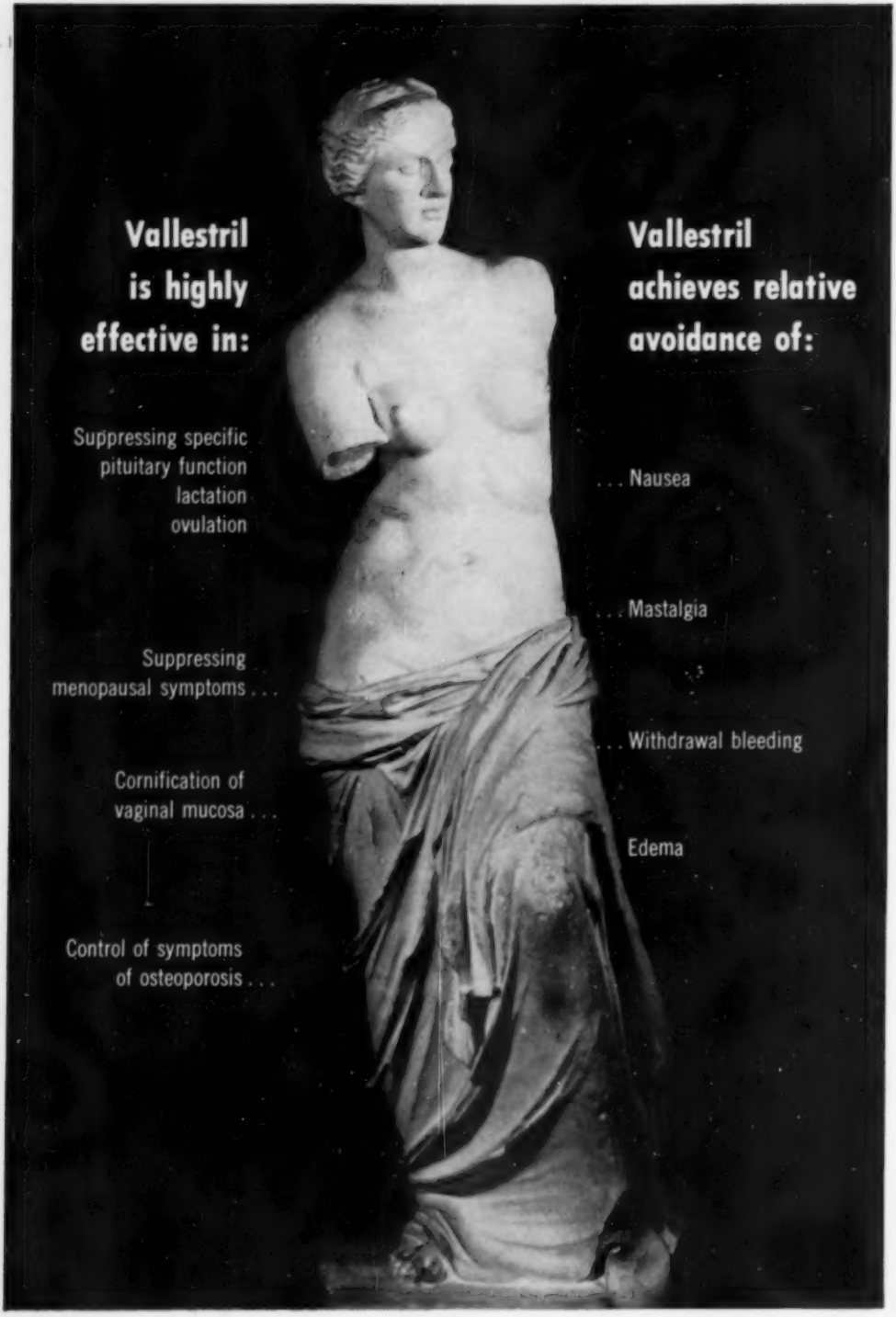
Doctor: "Mrs. Jones, what solution do you use for an occasional douche?"

Mrs. Jones: "Usually just plain warm water, doctor, but what do you use?"

Doctor: (without further thought) "I find 2 tablespoons of vinegar to a quart of warm water very comforting."—Embarrassed silence!

C. W., M.D.
Berkeley, Calif.

—Concluded on page 21a


Vallestril is highly effective in:
Suppressing specific pituitary function
lactation
ovulation
Suppressing menopausal symptoms . . .
Cornification of vaginal mucosa . . .
Control of symptoms of osteoporosis . . .
Vallestril achieves relative avoidance of:
. . . Nausea
. . . Mastalgia
. . . Withdrawal bleeding
Edema

SEARLE'S "*effective synthetic estrogen that is singularly free from . . . uterine bleeding . . . . For this reason alone, Vallestril is preferentially indicated. . . .*"[7]

Vallestril® Has *Target Action*

IT PROVIDES potent estrogenic activity *only in certain organs*, thus minimizing or completely obviating the well-known disadvantages of previously available estrogens. These disadvantages are the high incidence of withdrawal bleeding, nausea, edema in the female and mastalgia and gynecomastia in the male.

High Selectivity

Vallestril has been shown [1-5] to be more active than estradiol and to have twice the potency of estrone[6] *on the vaginal mucosa* when measured by the Allen-Doisy technic. However, Vallestril has been shown to have but one-tenth the activity of estrone *on the uterus* by the Rubin technic—a suggested explanation of its very low incidence of withdrawal bleeding.

Vallestril "quickly controls[7] menopausal symptoms, as well as the pain of postmenopausal osteoporosis and of the osseous metastases of prostatic cancer. The beneficial effect of the medication appeared within three or four days in most menopausal patients. There is also evidence that the patient can be maintained in an asymptomatic state by a small daily dose, once the menopausal symptoms are controlled."

Convenient Dosage Schedule

Simple dosage: Menopause—3 mg. (1 tablet) two or three times daily for two or three weeks, followed by 1 tablet daily for an additional month. Vallestril is supplied only in 3-mg. scored tablets.

Complete list of references available on request. G. D. Searle & Co., *Research in the Service of Medicine.*

NEW!

REVICAPS*

d-Amphetamine Vitamins and Minerals Lederle

Lederle

***RE**ducing*
***VI**tamin*
***CAPS**ules*

REVICAPS is the only ethical product that combines in a single convenient capsule:

The valuable two-fold action of d-amphetamine (5 mg. per capsule) which depresses the appetite, yet elevates the mood of the patient.

The bulk-supplying property of inert methylcellulose.

A complete vitamin and mineral supplementation frequently recommended with reducing diets.

Dosage directions are simple:
3 capsules daily, ½ to 1 hour before meals.

*Trade-mark

LEDERLE LABORATORIES DIVISION AMERICAN Cyanamid COMPANY 30 Rockefeller Plaza, New York 20, N.Y.

—Concluded from page 17a

New Proctological Technique

One busy Tuesday afternoon, a young woman was sitting in the adjacent treatment room to where I was working, suffering from a very severe case of thrombosed hemorrhoids. I was working with a little boy with a badly cut finger and it was necessary to make an aluminum splint to conform to the finger. I went down the hall to my tool drawer and picked up a pair of tin-snips and a pair of pliers.

I returned by way of the treatment room with the young lady with the thrombosed hemorrhoids, to wish her the time of day and tell her that I would be with her in just a few moments. I noticed the expression as she viewed the tools in my hand but I did not think anything of it at the moment. I then went into the other room to make the aluminum splint for the boy's finger. Later, when I was available for the young lady she seemed rather reserved but followed through the examination and treatment without too much furor.

About 3 months later, one afternoon this same young lady whom I had now become better acquainted with confided in me that she never was so scared in her life as when she first met me and I walked through the office with a pair of tin-snips and a pair of pliers in my hands. She further confided that she wondered what kind of a doctor I was, if I was going to use those tools to remove the hemorrhoids.

G. W., M.D.
Belmont, Calif.

Hurry, Doctor

This happened in January of 1906, in the Mountains of Eastern Tennessee.

Cold, raining, mud knee-deep, around one o'clock A.M. I was called on a case of obstetrics some five miles in the country. I made haste riding my horse to the patient's home. The road ran past the house through some 200 yards across a ravine, thus I had to ride by to a turn at the head of this ravine to get to the dwelling.

The husband was with me carrying a lighted lantern, so we were seen before we made the turn. I could see a lighted door open and a loud voice said, "Is that you Doc?" Answering in the affirmative, I was told, "*For God sakes hurry*, the durn bed is full of younguns." Sure enough there were four newborn babies in the bed.

C. D. T., M.D.
Florence, Ala.

Out of His Line

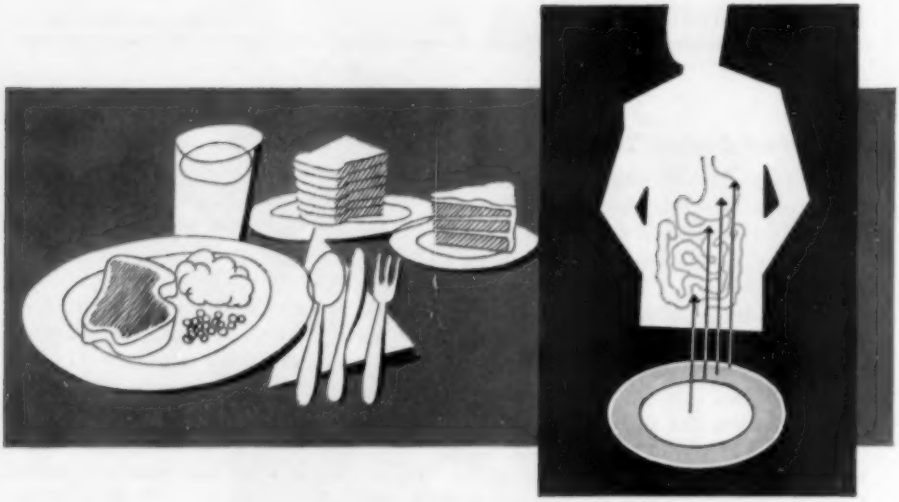
In answer to an "emergency call," I rushed into the patient's bedroom and found a middle-aged man with a very small superficial laceration of a finger. "You're not badly hurt," I told him. "What was the emergency?" "Well," he replied, "I always get scared at the sight of blood and I cut my finger while I was working." "What kind of work do you do?" I asked him. "I'm a butcher," he replied.

B. E. J., M.D.
Washington, D. C.

"Backlog" Sermon

2) We had a porter in my building who was quite a character. He talked very much like "Lightnin" in the Amos and Andy show. I heard that one of his sons was to graduate from High School and asked the father, "Brit, when does your son graduate?" He replied, "I don't rightly know doctor, but they'se goin to preach the 'back log' sermon next Sunday."

G. B. F., M.D.
Hot Springs, Ark.



effective aid to digestion
and assimilation of foods

CONVERTIN®

digestant tablets

Special layered construction
ensures separately timed action
of essential digestants for
maximum therapeutic effect

Each CONVERTIN tablet provides:

a sugar-coated outer layer containing
Betaine Hydrochloride . 130.0 mg.
(Equiv. 5 minims Diluted Hydrochloric Acid U.S.P.)
Oleoresin Ginger . . . . . 1/600 gr.

surrounding an enteric-coated core of
Pancreatin . . . . . 62.5 mg.
(Equiv. 250 mg. U.S.P.)
Desoxycholic Acid . . . . 50.0 mg.
Chlorophyllin . . . . . 10.0 mg.

DOSAGE: 2 tablets with or just after meals; clinical experience has shown that dose may be reduced, usually after first week, at physician's discretion.

Convertin aids protein digestion through the release of HCl from betaine hydrochloride and through the subsequent action of the pancreatic enzyme, trypsin.

Convertin aids carbohydrate digestion through the action of the pancreatic enzyme, amylopsin.

Convertin aids fat digestion through the action of desoxycholic acid (a pure bile acid) and the pancreatic enzyme, steapsin. And for patient-comfort . . . CONVERTIN contains the carminative, oleoresin ginger.

B. F. ASCHER & COMPANY, INC.
Ethical Medicinals
KANSAS CITY, MO.

Available on prescription at leading pharmacies in bottles of 84 and 500 tablets.

Pro·derma® SILICONE

prevents **torture** of **housewife's dermatitis**

The **2.5%** silicone in *Pro·derma* SKIN PROTECTIVE CREAM

protects the housewife's hands and arms against daily contact with soaps and household cleansers which cause eczematous dermatitis, one of the commonest and most refractory of skin conditions.

Does not sensitize or irritate • Easily removed with LOWILA Cake

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DIVISION OF FOSTER-MILBURN CO.

mineral-vitamin protection
during **PREGNANCY**
and **LACTATION**

Walker

PRECALCIN

CAPSULES

organic and inorganic calcium, phosphorus, iron, and essential vitamins

small, easy-to-take capsules

just one capsule t.i.d.

dry fill, no fish oil

exceptional tolerance and patient-appeal

bottles of 100, 500, 1000 —all economically priced

WALKER LABORATORIES, INC.
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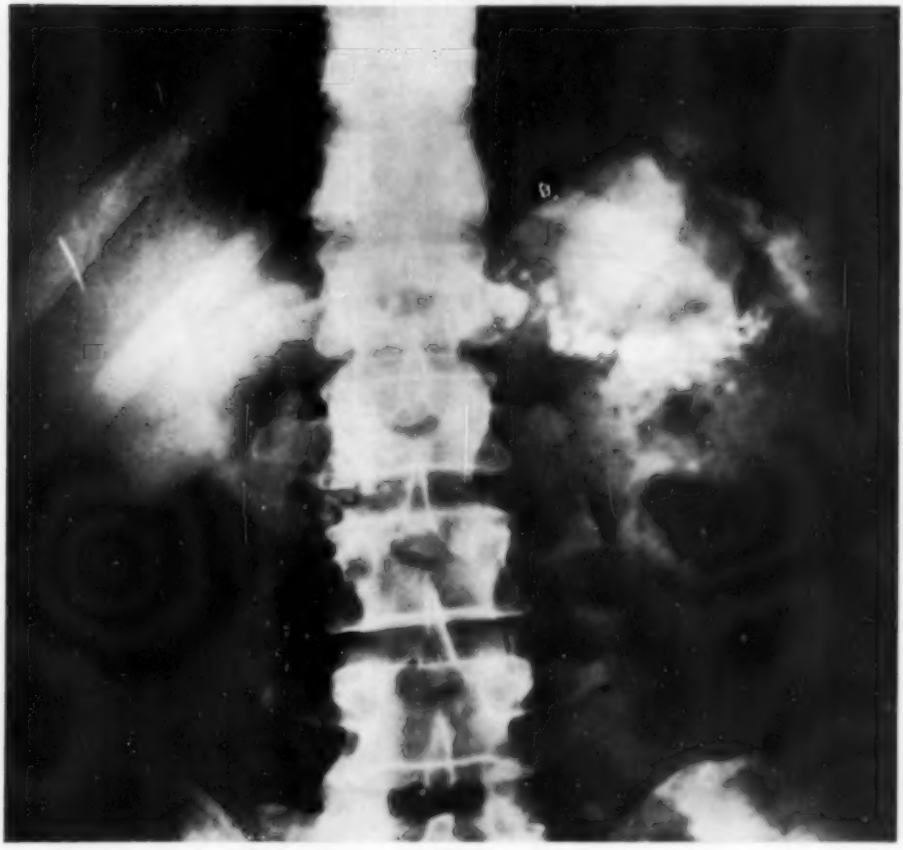
Diagnosis, Please!

WHICH IS *YOUR* DIAGNOSIS?

1. Calcified mesenteric nodes
2. Omental calcifications
3. Pancreatic concretions
4. Adrenal calcifications
5. Calcifications in a retroperitoneal tumor
6. Calcifications resulting from Pott's disease of the spine

(ANSWER ON PAGE 78a)



They all like

pediatric

ERYTHROCIN

TRADE MARK

STEARATE

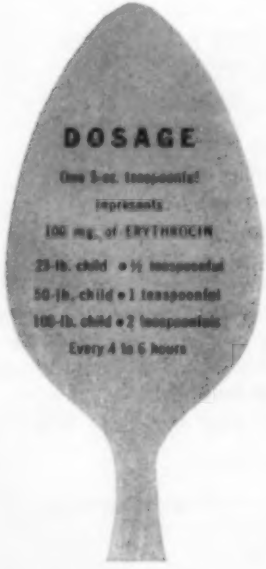
(Erythromycin Stearate, Abbott)

oral suspension

. . . the cocci-killing antibiotic for children of all ages. Tasty, stable, ready for instant use. *No mixing required*—drug retains potency for at least 18 months.

Winter infections—otitis media, bronchitis, sinusitis, pharyngitis and pneumonia—are especially sensitive to *Pediatric* ERYTHROCIN. Also, pyoderma, erysipelas, certain cases of osteomyelitis, and other infectious conditions.

Many physicians make it a practice to always prescribe *Pediatric* ERYTHROCIN when the organism is staphylococcus, because of the high incidence of staphylococcic resistance to many other antibiotics. And when the organism is resistant or when the patient is sensitive to penicillin and other antibiotics.



Pediatric ERYTHROCIN is specific in action—*less likely to alter normal intestinal flora than most other antibiotics.* Gastrointestinal disturbances are rare. No serious side effects reported.

Pediatric ERYTHROCIN can be administered before, after or with meals. Available in 2-fluidounce, pour-lip bottles. Abbott

1-52-54

a *real* advance in control of

rheumatic pain and spasm

greater predictability • greater safety

mephosal®

mephenesin "solubilized"* by sodium salicylate

MEPHOSAL (capsules, tablets, elixir) combines the safe, skeletal-muscle relaxant mephenesin *made freely soluble* by the primary rheumatic analgesic, sodium salicylate—and thus *more readily available*. The result is *predictable*, faster relief from pain and spasm in over 70% of rheumatic patients as against 55% with salicylates alone, and unpredictable relief with comparatively insoluble mephenesin alone.

IMPORTANT—now 3 dosage forms of **MEPHOSAL**—for greater flexibility and convenience.

MEPHOSAL CAPSULES
Broad range, general rheumatic therapy

Each capsule contains:
Mephenesin . . . . . 250 mg.
Sodium Salicylate . . . . . 250 mg.
(does not contain homatropine methylbromide)
Dose: 1 or 2 capsules every 3 or 4 hours.

MEPHOSAL TABLETS
For rheumatic cases with associated g.i. disturbance

Each tablet contains:
Mephenesin . . . . . 125 mg.
Sodium Salicylate . . . . . 125 mg.
Homatropine Methylbromide . . . . 1.25 mg.
Dose: 2 or 3 tablets every 3 or 4 hours.

MEPHOSAL ELIXIR
For rheumatic cases with associated g.i. disturbance

Each teaspoonful (4 cc.) contains:
Mephenesin . . . . . 400 mg.
Sodium Salicylate . . . . . 400 mg.
Homatropine Methylbromide . . . . 2.5 mg.
Dose: 1 teaspoonful every 3 or 4 hours.

Special note: MEPHOSAL TABLETS and MEPHOSAL ELIXIR both contain homatropine methylbromide.

All dosage forms should be given preferably after meals or with a little milk.

There are no real contraindications to the use of MEPHOSAL—no fear of serious toxic reactions—no fear of blood dyscrasias.

Please—when prescribing specify the dosage form clearly.

SAMPLES and literature on request. CROOKES LABORATORIES, INC Crookes MINEOLA, N. Y.

*Patent applied for

Therapeutic Preparations for the Medical Profession

Coroner's Corner

"Death By Kicking the Bucket"

"Bill Jones" was an odd-jobs worker in a small village, and lived in an abandoned one-room blacksmith shop. Bill's frequent excessive use of alcohol was widely known throughout the community. The unusual sight of an electric light burning late in the morning in the residential part of Bill's quarters caught the attention of his nephew. Finding the door locked, the nephew looked through the window and saw his uncle lying face down on the floor. He forcibly gained entrance, and discovering that his uncle was dead, he summoned me, the coroner.

During my investigation, I questioned the deceased man's brother, who stated that he had repeatedly warned Bill that he would surely come to a bad end during one of his alcoholic binges.

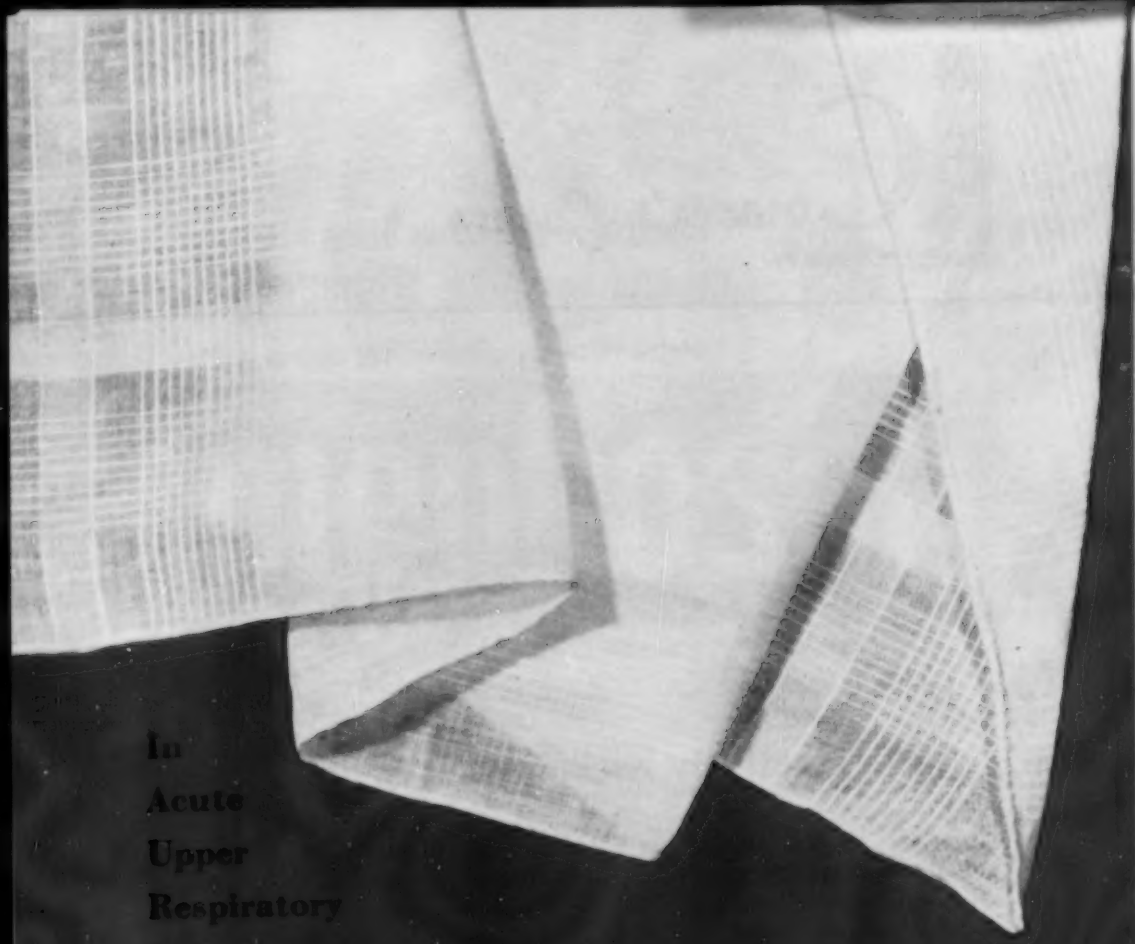
Examination showed that Bill's left foot was stuck in an empty paint bucket, and his flexed right elbow was likewise stuck in a somewhat smaller bucket. There was a massive contusion of the forehead. Autopsy revealed a severe intracranial injury sufficient to produce death. Chemical analysis showed that the blood contained no alcohol. Thus the deceased was entirely sober at the time of his death. The coroner's jury reconstructed the case about as follows:

Bill arose early in the morning, presumably for the purpose of passing some urine. In the dark part of his room he inadvertently stepped into an empty paint bucket. He tripped and fell heavily, striking his head on the concrete floor. In falling his flexed right elbow became caught in the smaller bucket. He died from the intracranial injury.

The coroner's jury ruled the case an accidental suicide, by literally "kicking the bucket".

J. L. C., M.D.

(Based upon an inquest held in Carroll County, Iowa)



In
Acute
Upper
Respiratory
Infections—

White's

A-P-CILLIN

Contains three established ingredients
for their combined attack.

Provides symptomatic relief *PLUS* the prevention and
control of secondary infection.

For the convenience of your patients,
each A-P-Cillin tablet provides:

1

A.P.C.—for its analgesic-antipyretic action

Acetylsalicylic acid—2½ gr.

Phenacetin—2 gr.

Caffeine—½ gr.

2

Antihistamine—for mild sedation and symptomatic relief, particularly from profuse nasal secretions

Phenyltoloxamine dihydrogen citrate—25 mg.

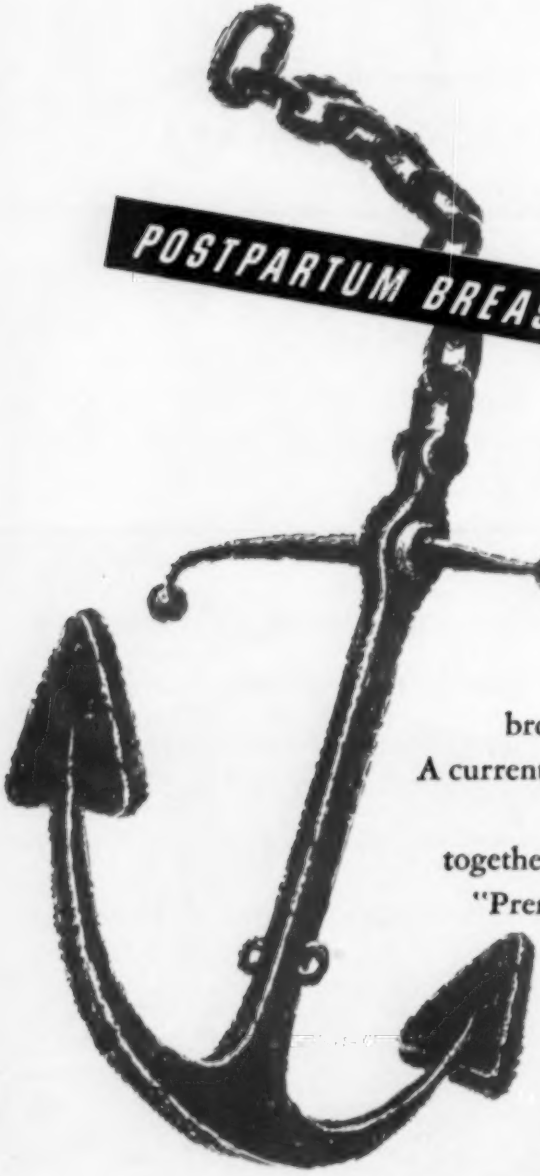
3

Penicillin—for prevention and control of secondary infections

Procaine penicillin G . . . 100,000 units.

Dosage: Usual adult dosage is 2 tablets t.i.d. one hour before or two hours after meals continued for at least three days.

WHITE LABORATORIES, INC., KENILWORTH, N. J.



POSTPARTUM BREAST ENGORGEMENT

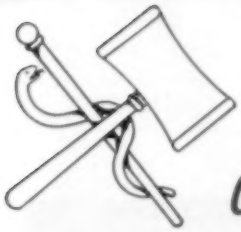
Estrogen and androgen
go together
like "anchor and chain"
to provide a dual approach
for maximum efficiency
in postpartum
breast engorgement.
A current trend of opinion is that
these two steroids,
together, as combined in
"Premarin" with Methyltestosterone,
will have a greater effect on
suppression of lactation
than either one alone.
Excellent results from
such therapy have been
reported by many clinicians.

"PREMARIN" with METHYLTESTOSTERONE

for combined estrogen-androgen therapy

Ayerst, McKenna & Harrison Limited · New York, N. Y. · Montreal, Canada

5318



What's Your Verdict?

Edited by Ann Picinich, Member of the Bar of New Jersey

A spinal test, intended for another patient, was performed through a mistake in identity upon Mrs. Jones. The test was given in the usual proper manner by inserting a hypodermic needle about three inches below the spinal cord and withdrawing a small amount of spinal fluid. But, as Dr. X admits with commendable frankness, such test was not necessary in Mrs. Jones' case, but was made through the carelessness of office assistants. Mrs. Jones now claims that, as a result of this test, she is suffering severe headaches, nausea, and pains in her legs, and for these pains Mrs. Jones seeks compensatory and punitive damages in the amount of $15,000.

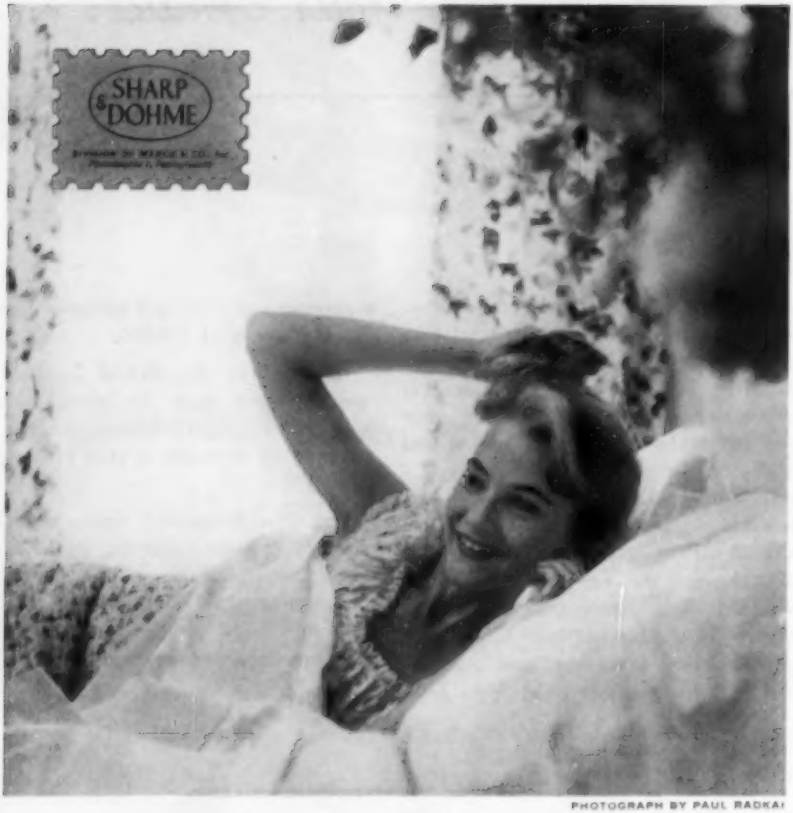
Mrs. Jones: Dr. should be held responsible not only for damages compensating the injury done to me, but also for punitive damages in view of his gross negligence.

Dr.: No intentional wrong has been done Mrs. Jones justifying punitive damages. Such damages are awarded as a punishment. Is a doctor to be punished for unintended negligence occurring in the practice of his profession?

How would you decide, Doctor?

THIS COURT SAID: The judgment of the lower court, based on the verdict of the jury for $6,250., is hereby set aside as including punitive damages, and a new trial is granted. Punitive damages are awarded on the theory of punishment and as a deterent to others who might commit similar wrongs. They are assessed where a tort is committed with a bad motive, or so recklessly as to imply a disregard of social obligations, and generally where the defendant appears to have done the act wantonly, maliciously, or wickedly. Since there was no evidence of such motives on the part of the doctor, the question of punitive damages should have been withdrawn from the consideration of the jury.

Based on a decision of the Supreme Court of Oregon



PHOTOGRAPH BY PAUL RADKAI

Exhausting cough didn't keep her awake

METHAJADE®

ANTITUSSIVE

ACTIONS AND USES: METHAJADE gives your cough-wracked patients restful relief by reducing cough frequency, yet maintains the normal cough reflex. It dilates bronchi, makes dry cough productive.

METHAJADE is useful in treating paroxysmal cough associated with bronchitis, tracheitis, dry pleurisy, pulmonary cancer, asthma and certain hard-to-control post-surgical coughs.

QUICK INFORMATION: METHAJADE is *sugar-free*, lime-flavored. Each fl. oz. contains: 10 mg. Methadone*; 0.12 Gm. 'Propadrine'; 1.2 Gm. potassium citrate; 4.5 cc. diluted phosphoric acid, and alcohol 5%. Adults, 1 to 2 tsp. every 3 to 4 hours.

SUPPLIED: Pint Spasaver® and gallon bottles.

* Warning: may be habit-forming.

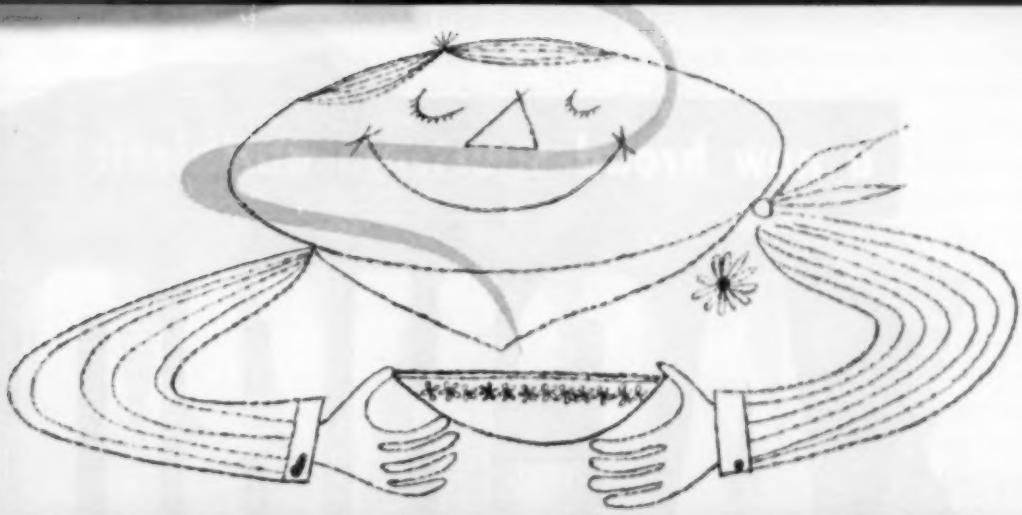
A new, potent antibacterial—

Gantricillin-300 'Roche'

...for wide-spectrum antibacterial therapy: GANTRICILLIN®-300 'Roche.' Each tablet provides 300,000 units of penicillin PLUS 0.5 Gm of Gantrisin®, the single, highly soluble sulfonamide.

Combined antibacterial therapy —

...with the new Gantricillin®-300 tablet 'Roche.' A convenient way of administering 300,000 units of penicillin PLUS 0.5 Gm of Gantrisin®, the single, soluble sulfonamide.



salt-free needn't mean flavor-free

DIASAL is enthusiastically endorsed by low salt dieters for the zest and flavor it gives to pallid, sodium-restricted meals. So closely does it match the appearance, texture and taste of table salt that patient adherence to your diet instructions is virtually assured.

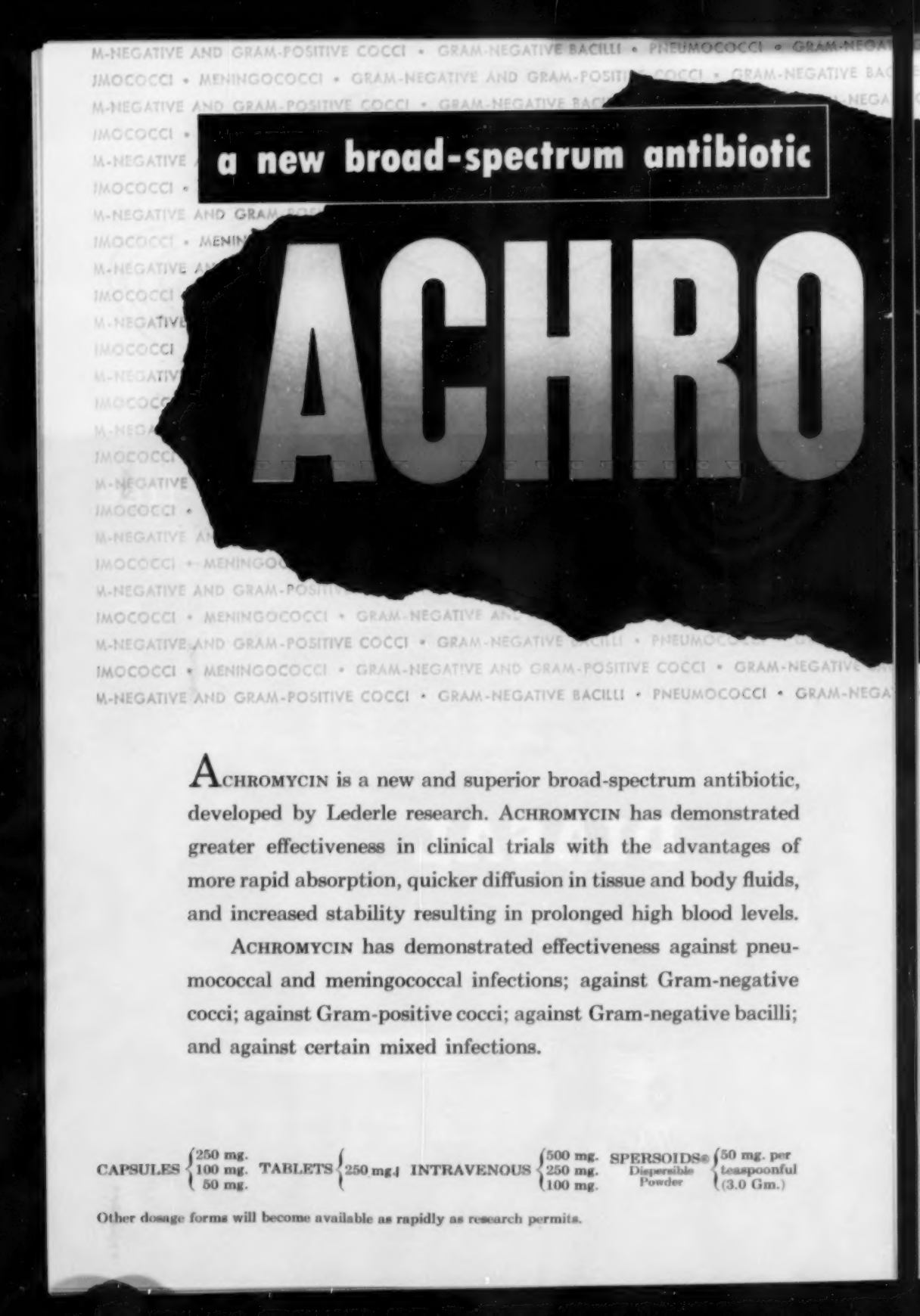
DIASAL contains only potassium chloride, glutamic acid and inert ingredients...no sodium, lithium, or ammonium. It may be used safely for extended periods, both at the table and in cooking. Because of its potassium, DIASAL may be a valuable prophylactic against potassium depletion.

DIASAL®

packaging: available in 2-ounce shakers and 8-ounce bottles.
Send for liberal supplies of tasting samples and low-sodium diet sheets for your patients.

FOUGERA

E. FOUGERA & COMPANY, INC.
75 Varick Street, New York 13, N. Y.



ACHROMYCIN is a new and superior broad-spectrum antibiotic, developed by Lederle research. ACHROMYCIN has demonstrated greater effectiveness in clinical trials with the advantages of more rapid absorption, quicker diffusion in tissue and body fluids, and increased stability resulting in prolonged high blood levels.

ACHROMYCIN has demonstrated effectiveness against pneumococcal and meningococcal infections; against Gram-negative cocci; against Gram-positive cocci; against Gram-negative bacilli; and against certain mixed infections.

CAPSULES	250 mg. 100 mg. 50 mg.	TABLETS	250 mg.	INTRAVENOUS	500 mg. 250 mg. 100 mg.
SPERSOIDS® Dispersible Powder	50 mg. per teaspoonful (3.0 Gm.)				

Other dosage forms will become available as rapidly as research permits.

broader tolerance

greater stability

faster absorption

Lederle

LEDERLE LABORATORIES DIVISION AMERICAN Cyanamid COMPANY 30 Rockefeller Plaza, New York 20, N. Y.

Anemia and nutritional deficiencies go hand in hand

"... anemia indicates other deficiencies with their attendant biochemical and kinetic disorders"[1]

When Vitamin-Mineral deficiencies accompany or are the underlying cause of anemia, a satisfactory response to treatment may be delayed or prevented unless such co-existing deficiencies are corrected.

HEPTUNA PLUS provides adequate amounts of Vitamins, Minerals and Trace Elements known to be essential both in hemopoiesis and in the restoration and maintenance of a good nutritional state.

1. Traylor, J. B.; Terpin, R.: Am. J. Obst. and Gynec. 61:71 (Jan.) 1951, p. 74

When The Response Is Delayed, Prescribe

Heptuna plus

Each Capsule Contains:

FERROUS SULFATE U.S.P.	4.5 gr.
VITAMIN B12	5.0 mcg.
FOLIC ACID	0.33 mg.
ASCORBIC ACID	50.0 mg.
VITAMIN A	5,000 U.S.P. units
VITAMIN D	500 U.S.P. units
THIAMINE HYDROCHLORIDE	2 mg.
RIBOFLAVIN	2 mg.
PYRIDOXINE HYDROCHLORIDE	0.1 mg.
NIACINAMIDE	10 mg.
CALCIUM PANTOTHENATE	0.33 mg.
COBALT	0.1 mg.
COPPER	1 mg.
MOLYBDENUM	0.2 mg.
CALCIUM	37.4 mg.
IODINE	0.05 mg.
MANGANESE	0.033 mg.
MAGNESIUM	2 mg.
PHOSPHORUS	29.0 mg.
POTASSIUM	1.7 mg.
ZINC	0.4 mg.

With other B-Complex Factors from Liver

J. B. ROERIG AND COMPANY, CHICAGO 11, ILLINOIS

LETTERS TO THE EDITOR

This department is offered as an Open Forum for the discussion of topical medical issues. All letters must be signed. However, to protect the identity of writers, who are invited to comment on controversial subjects, names will be omitted when requested.

"Bolstering Bosoms"

Dear Editor:

Recently a young married woman came to me with a well-known problem; namely, that of insufficient mammary tissue. She is a good patient of mine, and I have delivered three children for her. Her desire for improving her bust line is much greater than the usual wish to imitate the movie star figures. Hers is a complex emotional fixation that has convinced her that she is losing the love of her husband as a result of her flat bust. She had quite an ample breast contour prior to having the children.

My purpose in writing to you is to find out if there is any relatively safe plastic injectable material which can be injected by needle into the subfascial space between the mammary gland and the pectoralis muscle. If there is such a material available where can I find it and where can I find a description concerning its use?

Your reply in the near future will be highly appreciated.

L.L.E., M.D.

Dear Doctor:

Thank you for your letter of Dec. 18 inquiring about an injectable plastic mate-

—Concluded on page 60a

SEBORRHEIC DERMATITIS

SELSUN®

controls itching and scaling

FOR 1 TO 4 WEEKS

BEFORE TREATMENT—patient had history of seborrheic dermatitis of the scalp for 13 years. Previous treatment with medicated ointment was unsatisfactory—scaling usually was still evident the next day after washing hair.

YOU *can expect results like these with* SELSUN: complete control in 81 to 87 per cent of all seborrheic dermatitis cases, and in 92 to 95 per cent of common dandruff cases.[1-3] SELSUN keeps the scalp free of scales for *one to four weeks*—relieves itching and burning after only two or three applications.

Your patients just add SELSUN to their regular hair-washing routine. No messy ointments, no bedtime rituals, no disagreeable odors. SELSUN leaves the hair and scalp clean and easy to manage.

Available in 4-fluidounce bottles, SELSUN is ethically promoted and dispensed only on your prescription. Abbott

1. Slepyan, A. H. (1952) Arch. Dermat. & Syph., 65:228, February.
2. Slinger, W. N. and Hubbard, D. M. (1951) *ibid.*, 64:41, July.
3. Sauer, G. C. (1952) J. Missouri, M. A., 49:911, November.

AFTER TREATMENT—patient applied SELSUN twice a week for first two weeks, once a week for the next two weeks. Then followed a lapse in treatment. Note that scalp is still scale-free two weeks after last treatment.

in times of "STRAIN *and* STRESS"

STRESSCAPS*

Stress Formula Vitamins Lederle

When the body is subjected to unusual physiologic stress, the need for dietary supplementation with *all* the essential vitamins is at its greatest. Such need arises:

After sustaining fractures and other serious trauma.
When there has been serious vitamin depletion.
After sustaining second or third degree burns.
In severe illness. In postoperative states.

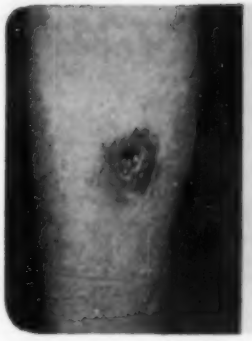
STRESSCAPS incorporate the complete formula recommended by the National Research Council of the National Academy of Science** for use in acutely ill or injured persons, plus therapeutic amounts of Vitamin K.

*Trade-mark **"Therapeutic Nutrition," 1952

LEDERLE LABORATORIES DIVISION Lederle AMERICAN Cyanamid COMPANY

30 ROCKEFELLER PLAZA, NEW YORK 20, N. Y.

varicose ulcer



FEBRUARY 11
2.1 x 1.3 cm. varicose ulcer, unresponsive to previous therapy.

FEBRUARY 19
Epithelial ingrowth from margins after 8 days' therapy with MY-B-DEN, Sustained-Action, 20 mg.

MARCH 19
Ulcer completely healed. Patient received 22 injections of MY-B-DEN, Sustained-Action, 20 mg. (1 cc. I. M.)

clinical demonstration of response to

MY-B-DEN®

(adenosine-5-monophosphate)

NONTOXIC, SYSTEMIC MUSCLE ADENYLIC ACID THERAPY

The complications of chronic venous insufficiency respond dramatically to MY-B-DEN. Itching, edema, pain, and burning are quickly relieved and "the ulcer proceeds to heal."[1] The benefits of supportive measures are enhanced, and when surgery is indicated MY-B-DEN is a "valuable adjunct."[2]

Administration: 1 cc. injected intramuscularly 3 times weekly. For severe cases dosage treatment may require 4 to 6 weeks.

Supplied: MY-B-DEN Sustained-Action in gelatin solution: 10 cc. vials in two strengths, 20 mg. per cc. and 100 mg. per cc. adenosine-5-monophosphate as the sodium salt. (Also available in Aqueous Solution and Sublingual Tablets.)

1. Rottino, A.; Boller, R., and Pratt, G. H.: Angiology *1*:194, 1950.

2. Boller, R.; Rottino, A., and Pratt, G. H.: Angiology *3*:260, 1952.

"Pioneers in Adenylic Acid Therapy"

Bischoff

ERNST BISCHOFF COMPANY, INC.
IVORYTON, CONNECTICUT

For a good appetite... to speed recovery

Only one teaspoonful or one tablet daily of 'Trophite'—a high-potency combination of B_{12} and B_1—is recommended to accelerate recovery through an increased appetite.

TROPHITE*

B_{12} plus B_1

Now available in 2 dosage forms:

'TROPHITE' TABLETS
for older children and adults. Supplied in bottles of 50 tablets.

'TROPHITE' in delicious liquid form for young children. Supplied in 4 fl. oz. (118 cc.) bottles.

Each tablet or teaspoonful (5 cc.) contains:
Vitamin B_{12}—25 mcg.
Vitamin B_1—10 mg.

Smith, Kline & French Laboratories, Philadelphia

**T.M. Reg. U.S. Pat. Off.*

"COLD" WEATHER PROTECTION

To aid the upper respiratory tract in combating cold symptoms.

NEO-NORMADRINE®

Nasal decongestant with antihistaminic action.

Phenylephrine Hydrochloride	0.25%
Pyro-Maleate® (brand of Pyrilamine Maleate)	0.25%
Cetyl Dimethyl Benzyl Ammonium Chloride	1:5000

PYRALDINE®

For control of cough, particularly the dry, persistent and unproductive type.

Each fluid ounce contains

Dihydrocodeinone Bitartrate	¼ gr.
Pyro-Maleate®	75 mg.
Ammonium Chloride	6 gr.
Citric Acid	3 gr.
Alcohol	3%

Also available — as Pyraldine #3 — with added Phenylephrine Hydrochloride, 30 mg. per fluid ounce.

BELLASPRO®

Effective relief from the aches and — algias of cold weather infections.

Each tablet contains

Belladonna Alkaloids (Equivalent to atropine content in 1/4 minim Belladonna Tincture)	0.0714 mg.
Caffeine	½ gr.
Acetophenetidin	2½ gr.
Acid Acetylsalicylic	3½ gr.

Also available with ⅛ gr. or ½ gr. codeine phosphate.

VANPELT & BROWN, INC. Richmond, Virginia

fast-acting salicylate formula

HIGH in analgesic power

LOW in risk to the patient

Recent studies[1,2] suggest that the time-tried salicylates exert a *hormonal* action similar to that of ACTH, stimulating release of cortisone.

Whenever rapid and sustained salicylate action is desired, **ELPAGEN** gives your patient the benefits of a *potentiated* salicylate combination in *uncoated* tablet form—without the gastric irritation of unmodified salicylates and without the potential dangers (or expense) of ACTH or cortisone itself.

ELPAGEN PATCH

Each orange-colored, uncoated tablet provides:

Sodium salicylate	5 gr.	(325 mg.)	*POTENTIATED SALICYLATE BLOOD LEVELS*
Sodium para-aminobenzoate	3 gr.	(195 mg.)	
Salicylamide	½ gr.	(32.5 mg.)	

plus

Ascorbic acid (as sodium ascorbate)	30 mg.	*SAFEGUARD AGAINST VITAMIN C DEPLETION AND CAPILLARY HEMORRHAGE*
Dihydroxy aluminum aminoacetate	½ gr. (32.5 mg.)	BUFFERING ACTION *OVERCOMES GASTRIC INTOLERANCE*[3]

SUPPLIED in bottles of 100 and 500 tablets.

1. Van Cauwenberge, H.: Lancet 261:374, 1951; Van Cauwenberge, H., and Heusghem, C.: Proc. Soc. Exper. Biol. & Med. 80:51, 1952. 2. Pelloja, M.: Lancet 1:233, 1952. 3. Paul, W. D., et al.: J. Am. Pharm. A., Scient. Ed. 39:21, 1950.

THE E. L. PATCH COMPANY

STONEHAM • MASSACHUSETTS

The first COMPLETE OB SUPPLEMENT with specific protection against Pregnancy Toxemias

enough pyridoxine

enough pyridoxine

OB-6

VITAMIN-MINERAL SUPPLEMENT

With Full Vitamin B_{12} Requirement

enoug

enoug

enoug

The daily dose of 3 capsules contains:

Pyridoxine Hydrochloride (Vit. B_6)	10.0 mg.	Iron (as ferrous sulfate)	15.0 mg.
Vitamin B_{12} (Activity equivalent from Streptomyces fermentation)	5.0 mcg.	Calcium (as dicalcium phosphate anhydrous)	0.75 Gm.
Folic Acid	2.0 mg.	Phosphorus (as dicalcium phosphate anhydrous)	0.58 Gm.
Niacinamide	15.0 mg.	Iodine	0.075 mg.
Riboflavin (Vit. B_2)	3.0 mg.	Copper	0.48 mg.
Thiamine Hydrochloride (Vit. B_1)	1.5 mg.	Manganese	0.5 mg.
Calcium Pantothenate	3.0 mg.	Cobalt	0.04 mg.
Ascorbic Acid (Vit. C)	100.0 mg.	Molybdenum	0.1 mg.
Vitamin A Acetate	6000.0 U.S.P. Units	Potassium	2.0 mg.
Vitamin D (Calciferol)	600.0 U.S.P. Units	Zinc	0.5 mg.
		Magnesium	3.0 mg.

enough pyridoxine

enough pyridoxine

Recent findings[1-4] point to a deficiency of pyridoxine, or a related defect in tryptophan metabolism correctable by pyridoxine, as a probable cause of hyperemesis gravidarum, toxemia, and eclampsia.

OB-6* provides adequate amounts of all the important vitamins and minerals needed to keep the pregnant patient nutritionally normal . . . *including enough pyridoxine* (10 mg. per daily dose)[4] *to provide specific protection against pregnancy toxemias.*

SUPPLIED: In bottles of 90, 500, and 1000 easy-to-swallow capsules.

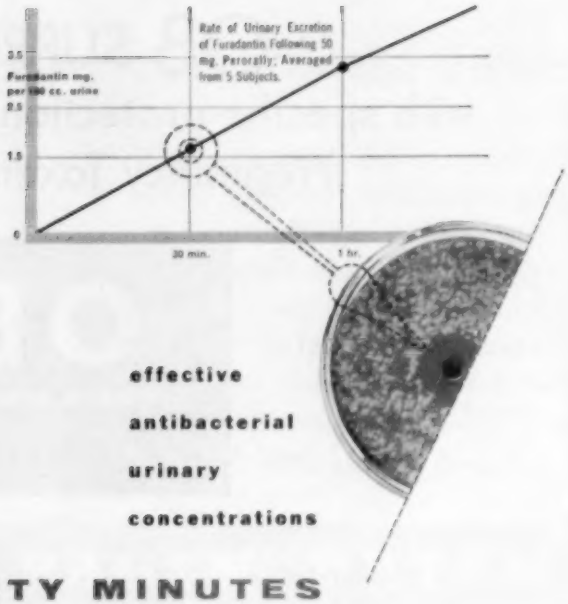
References: 1. Nutrition Rev. 11:75, 1953. 2. Spence, H., et al.: Am. J. Obst. & Gynec. 62:84, 1951. 3. Wachstein, M., and Gudaitis, A.: J. Lab. & Clin. Med. 40:550, 1952. 4. Idem: Ibid. 42:98, 1953.

*Trademark of Kremers-Urban Co.

Ethical Pharmaceuticals Since 1894

KREMERS-URBAN COMPANY

Laboratories in Milwaukee



effective

antibacterial

urinary

concentrations

IN THIRTY MINUTES

So remarkable is the affinity of Furadantin for the urinary tract that the urine becomes actively antibacterial within 30 minutes after ingestion, as shown by urinary concentrations and agar plate tests.

Furadantin exhibits an extensive range of antibacterial activity against both gram-positive and gram-negative urinary tract invaders.

Scored tablets of 50 & 100 mg.

IN ACUTE AND CHRONIC URINARY INFECTIONS

FURADANTIN®

BRAND OF NITROFURANTOIN, EATON

ACCEPTED

EATON LABORATORIES Inc.

NORWICH, NEW YORK

THE **NITROFURANS** — A UNIQUE CLASS OF ANTIMICROBIALS PRODUCTS OF EATON RESEARCH

"MEDIATRIC"® CAPSULES

IN PREVENTIVE GERIATRICS

A dynamic approach to better health for the aging patient

"Mediatric" Capsules are specially formulated to meet the needs of your aging patients — the postmenopausal woman and the man over 50. Steroids and nutritional factors will effectively counteract declining sex hormone function and dietary inadequacy, as well as interact to maintain the integrity of general metabolic processes. The mild antidepressant will tend to promote a brighter mental outlook. "Mediatric" Capsules will help your patients enjoy better health now and in the years to come.

Each capsule contains:

STEROIDS	
Conjugated estrogens equine ("Premarin"®)	0.25 mg.
Methyltestosterone	2.5 mg.
NUTRITIONAL SUPPLEMENTS	
Vitamin C (ascorbic acid)	50.0 mg.
Thiamine HCl (B_1)	5.0 mg.
Vitamin B_{12} U.S.P. (crystalline)	1.5 mcg.
Folic acid	0.33 mg.
Ferrous sulfate exsic.	60.0 mg.
Brewers' yeast (specially processed)	200.0 mg.
ANTIDEPRESSANT	
d-Desoxyephedrine HCl	1.0 mg.

No. 252 — Supplied in bottles of 30, 100, and 1,000.

SUGGESTED DOSAGE:

Male: One capsule daily, or more as required.

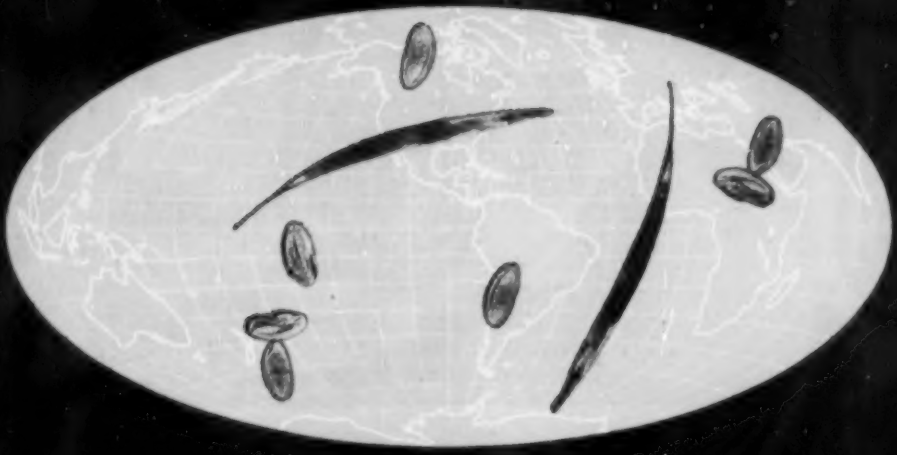
Female: One capsule daily, or more, taken in 21-day courses with a rest period of one week between courses.

5308

Ayerst

Ayerst, McKenna & Harrison Limited
New York, N. Y. • Montreal, Canada

for "This Wormy World"



SYRUP OF

'ANTEPAR'*

18 million people in the United States and Canada are unwilling hosts to *Enterobius vermicularis*.[1]

In clinical trials, over 80% of cases have been cleared of the infestation by one course of treatment with 'Antepar'.[2, 3]

'Antepar' is virtually nontoxic in recommended doses, and is excellently tolerated. It is a fruit-flavored syrup which is readily accepted.

During treatment, reasonable precautions are taken to prevent reinfestation, but enemas and laxatives are NOT necessary.

***SYRUP OF 'ANTEPAR'** Citrate brand Piperazine Citrate, containing the equivalent of 100 mg. piperazine hexahydrate per cc.

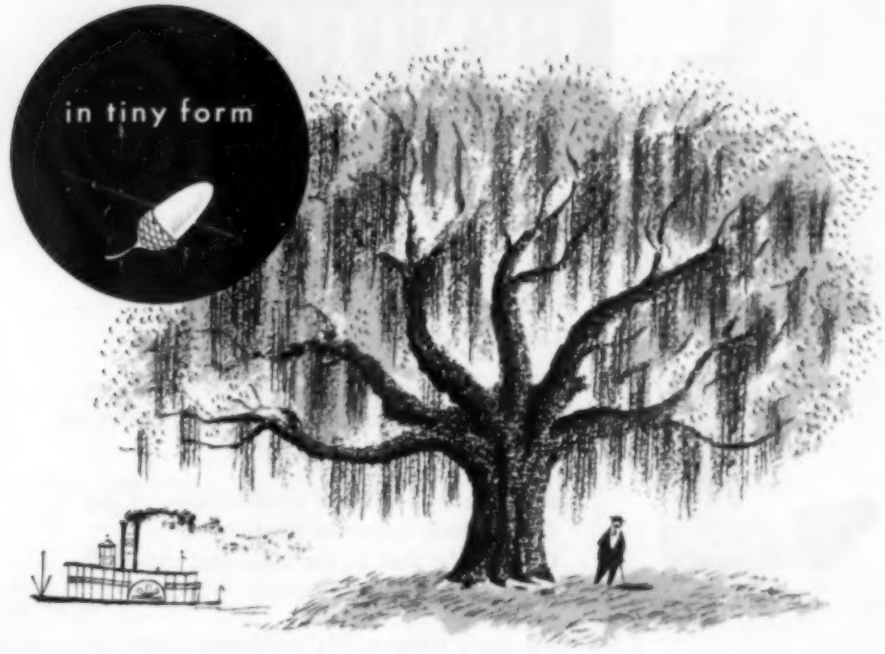
Bottles of 4 fluid ounces and 1 pint

References: 1. Stoll, N. R.: J. Parasitol. 33: 1, 1947. 2. Bumbalo, T. S., and Gustina, F. J.: To be published. 3. White, R. H. R., and Standen, O. D.: Brit. M. J. 2: 755, 1953.

Full information sent on request.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., *Tuckahoe 7, N. Y.*

Great Potency



the therapeutic multivitamin tablets with B_{12} and no fish oil

In the smallest, most potent tablet of its kind, OPTILETS offer new convenience in multivitamin therapy. One compressed, easy-to-swallow OPTILET provides six synthetic vitamins *plus 6 mcg. of* B_{12}. With synthetic A, there's no fish-oil odor, taste or "burp." Tablets—not capsules—OPTILETS can't leak, won't stick together. One or more daily is the therapeutic dose. Sugar-coated OPTILETS are available in bottles of 50, 100 and 1000 vanilla-flavored tablets. Cost no more than ordinary therapeutic formula vitamins. Abbott

Each OPTILET tablet contains:

Vitamin A (Synthetic Vitamin A Palmitate)	25,000 U.S.P. units
Vitamin D (Viosterol)	1000 U.S.P. units
Thiamine Mononitrate	10 mg.
Riboflavin	5 mg.
Nicotinamide	150 mg.
Vitamin B_{12} (as vitamin B_{12} concentrate)	6 mcg.
Ascorbic Acid	150 mg.


Actual Size

Optilets

(Abbott's Therapeutic Formula Vitamin Tablets)

an important new

anticholinergic-antispasmodic agent

CENTRINE

TRADEMARK

Hydrogen Sulfate

Milligram for milligram, the most potent of all synthetic anticholinergic-antispasmodics available. Average dose is only ½ milligram *t.i.d.* or *q.i.d.*

Remarkably non-toxic. Incidence of side effects requiring temporary discontinuance of therapy has been reported as 1.5%.[1]

Available in solution for administration by the drop. Permits unlimited flexibility in titrating the dose to the individual patient in increments of 1/20 milligram.

Practically tasteless. No unpleasant immediate taste, no bitter after-taste, with either Centrine Tablets (uncoated) or Centrine Solution for drop-dosage.

Centrine is indicated in peptic ulcer, hypertrophic gastritis, pylorospasm, intestinal hypermotility, and related conditions in which spasmolytic and antisecretory effects are desired.

Supplied as scored tablets (uncoated), 0.5 mg., bottles of 100; and in solution, 0.05 mg. per drop, in 1 oz. bottles with dropper.

Bristol
LABORATORIES INC.
SYRACUSE, NEW YORK

1. Bolt, R. J., Bratt, H., and Pollard, H. M., Gastroenterology 24: 204 (June) 1953

MODERN MEDICINALS

These brief resumes of essential information on the newer medicinals, which are not yet listed in the various reference books, can be pasted on file cards and a record kept. This file can be kept by the physician for ready reference.

Bonamine Tablets, 25 Mgm., Chas. Pfizer & Co., Brooklyn 6, N. Y. Brand of parachloramine hydrochloride. Prolonged protection against motion sickness. **Dose:** Two tablets will provide adequate protection for a full 24 hours in most adults. **Sup.:** In bottles of 100 tablets.

Combandrin Parenteral, Chas. Pfizer & Co., Inc., Brooklyn 6, N. Y. Each cc. contains estradiol benzoate, 1 mg.; testosterone propionate, 20 mg. Androgen-estrogen therapy. **Dose:** As determined by physician. **Sup.:** Steraject with needle, 1 cc. disposable cartridge, and in 10 cc. vials.

Corcidin Pediatric Medilets, Schering Corp., Bloomfield, N. J. Each Medilet contains Chlor-Trimeton maleate, 0.75 mg.; aspirin 80 mg.; and acetophenetidin, 16 mg. For children, for relief of nasal symptoms of colds and aches and pains accompanying a cold. **Dose:** Children under 6 years, ¼ to 1 Medilet, or as directed by physician; 6 to 12 years, 1 to 2 Medilets. Each dose may be repeated every 3 to 4 hours. Larger doses as directed by physician. **Sup.:** In bottles of 100 Medilets

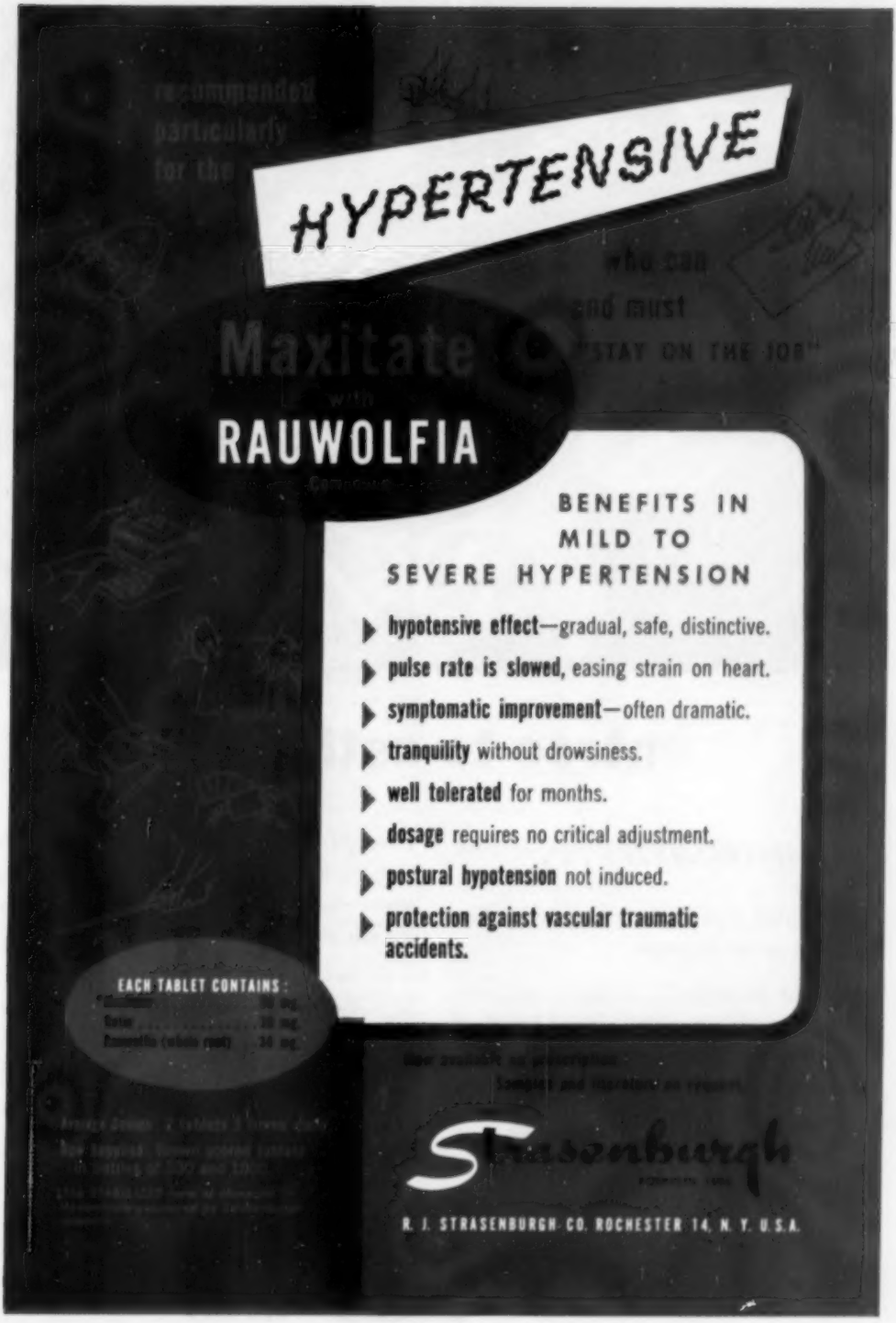
Cortril Aqueous Suspension
Cortril Ophthalmic Ointment
Cortril Topical Ointment, Pfizer Laboratories, Brooklyn 6, N. Y. Hydrocortisone acetate. Suspension: treatment of joint disorders associated with rheumatoid arthritis and osteoarthritis: Ophthalmic Ointment: treatment of allergic, bacterial and traumatic eye inflammations: Topical Ointment: treatment of allergic dermatoses. **Dose:** Suspension is by injection into affected joint, Ointments applied locally as directed by physician. **Sup.:** Suspension in 5 cc. vials at 25 mg. per cc.; Ophthalmic Ointment in ⅛ oz. tubes at strengths of 0.5% and 2.5%: Topical Ointment in 1/6 oz. tubes in strengths of 1.0% and 2.5%.

Diamox Tablets 250 Mgm., Lederle Laboratories, Pearl River, N. Y. Diamox acetazoleamide (2-acetylamino-1, 3, 4, thiadiazole-5-sulfonamide). For treatment of edema due to congestive heart failure. **Dose:** For diuresis: 1 or 1½ tablets depending on weight, taken orally in the morning daily or once in 2 days. **Sup:** In bottles of 25 and 100 tablets.

Diogynets Tablets, Chas. Pfizer & Co., Inc., Brooklyn 6, N. Y. Each tablet contains estradiol, 0.125 mg., 0.25 mg. or 1.0 mg. As replacement therapy when normal ovarian function declines or ceases completely. **Dose:** As determined by physician. **Sup:** All three strengths in bottles of 50 tablets.

Erythro-Myciguent Ointment, The Upjohn Co., Kalamazoo, Mich. Each gram contains: erythromycin, 5.0 mg.; neomycin sulfate 5.0 mg.; methylparaben, 0.2 mg.; butyl-p-hydroxybenzoate, 1.8 mg. In the treatment of superficial bacterial infections of the skin, such as impetigo, impeti-

—Concluded on page 57a


recommended particularly for the
HYPERTENSIVE
who can and must "STAY ON THE JOB"
Maxitate
with
RAUWOLFIA
BENEFITS IN MILD TO SEVERE HYPERTENSION
hypotensive effect—gradual, safe, distinctive.
pulse rate is slowed, easing strain on heart.
symptomatic improvement—often dramatic.
tranquility without drowsiness.
well tolerated for months.
dosage requires no critical adjustment.
postural hypotension not induced.
protection against vascular traumatic accidents.
EACH TABLET CONTAINS:
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R. J. STRASENBURGH CO. ROCHESTER 14, N. Y. U.S.A.

entrée to asthma?

not necessarily . . .

Tedral, taken at the first sign of attack, often forestalls severe symptoms.

relief in minutes . . . Tedral brings symptomatic relief in a matter of minutes. Breathing becomes easier as Tedral relaxes smooth muscle, reduces tissue edema, provides mild sedation.

for 4 full hours . . . Tedral maintains more normal respiration for a sustained period—not just a momentary pause in the attack.

Prompt and prolonged relief with Tedral can be initiated any time, day or night, whenever needed, without fear of incapacitating side effects.

Tedral provides:

theophylline	2 gr.
ephedrine	3/8 gr.
phenobarbital	1/8 gr.

in boxes of 24, 120 and 1000 tablets

Tedral®

WARNER-CHILCOTT
Laboratories NEW YORK

—Concluded from page 53a

ginous dermatitis, folliculitis, paronychia, external otitis, cellulitis, and secondarily infected burns, ulcers and eczema. **Dose:** Applied locally 2 to 5 times daily. **Sup:** In tubes of ½ oz. in boxes of 1 tube, 1 dozen tubes, 3 dozen, 6 dozen and 12 dozen.

Maxitate with Rauwolfia Compound Brown Tablets, R. J. Strasenburgh Co., Rochester 14, N. Y. Each tablet contains Maxitate 30 Mgm., Rutin 30 Mgm., Rauwolfia (whole root) 30 Mgm. For oral treatment in moderately to mildly severe labile hypertension and for improvement of prevention of associated capillary fault. **Dose:** Usual starting is 2 tablets 3 times daily. **Sup:** In bottles of 100 tablets.

Percorten Trimethylacetate, Ciba Pharmaceutical Products, Inc., Summit, N. J. Desoxycorticosterone trimethylacetate, 25 mg./ml., as an aqueous suspension for intramuscular use only. In chronic primary and secondary adrenocortical insufficiency; hypertension. **Dose:** Average depot dose, 60 to 90 mg. every 4 weeks. **Sup:** In vials of 4 ml.

Polycin Ophthalmic Ointment, Pitman-Moore Co., Indianapolis 6, Ind. Contains 10,000 units of polymyxin B sulfate and 500 units of bacitracin per gram in an anhydrous lanolin-petrolatum base. For therapeutic or prophylactic use in infections due to organisms sensitive to either bacitracin or polymyxin. **Dose:** Apply locally several times daily as directed by physician. **Sup:** In ⅛ oz. tubes with applicator tip.

Readicillin, The Upjohn Co., Kalamazoo, Mich. Crystalline penicillin G potessium suspended in a cherry-flavored vehicle. For penicillin sensitive infections where high initial blood levels are required, especially for pediatric use. **Dose:** Orally, as directed by physician. **Sup:** In bottles containing 60 cc. of the suspension, 50,000 units of penicillin per cc.

Semets Troches, The S. E. Massengill Co., Bristol, Tenn. A new germicidal-antiseptic preparation containing tyrothricin, hyamine and benzocaine. In throat irritations associated with coughs, colds, tonsillitis and pharyngitis. **Dose:** One troche as required. **Sup:** In boxes of 12 and 500 troches.

Semoid Rectal Suppositories, The S. E. Massengill Co., Bristol, Tenn. Each suppository contains tetracaine hcl., 10 mg.; phenylephrine, 5 mg; 9-aminoacridine hcl. 5 mg.; cod-liver oil conc., equiv. to 500 u. Vitamin D; cocoa butter base. For the relief of pain, irritation and tissue engorgement. **Dose:** One suppository as directed by physician. **Sup:** In boxes of 12 suppositories.

Synandrol-F Parenteral, Chas. Pfizer & Co., Inc., Brooklyn 6, N. Y. Each cc. contains testosterone (cryst.), 25 mg., 50 mg or 100 mg., in aqueous suspension. Same indications as Synandrol Parentera. **Dose:** As determined by physician. **Sup:** In 10 cc. vials, 25 mg./cc., 50 mg./cc. and 100 mg./cc.

Terpin Hydrate-Codeine Lozenges, The S. E. Massengill Co., Bristol, Tenn. Each lozenge contains codeine sulfate, 5 mg.; terpin hydrate, 50 mg. Expectorant and sedative for cough. **Dose:** One lozenge equivalent to ½ teaspoonful elixir terpin hydrate and codeine. **Sup:** In boxes of 100 and 500 lozenges.

Trophite Tablets, Smith, Kline & French Laboratories, Philadelphia 1, Pa. Each tablet contains 25 mg. of vitamin B_{12} plus 10 mg. of crystalline vitamin B_1. New dosage form for adults. For shortening convalescence through increased appetite, treating the chronically ill or undernourished patient, and supplementing nutrition in chronic diarrhea and celiac disease. **Dose:** As determined by physician. **Sup:** In bottles of 50 tablets.

Veralba Injection, Pitman-Moore Co., Indianapolis 6, Ind. Each cc. contains 0.2 mg. protoveratrines A and B in an isotonic sodium chloride, sodium acid phosphate solution. Metacresol 0.2% is used as a preservative. For the symptomatic treatment of acute episodes and crises in essential hypertension, acute or chronic renal hypertension, malignant hypertension, and hypertension associated with toxemia of pregnancy. **Dose:** As determined by physician. **Sup:** In 10 cc. sterile vials.

Vi-Dexemin Tablets, Smith, Kline & French Laboratories, Philadelphia 1, Pa. Each tablet contains 5 Mgm. of Dexedrine Sulfate, ten essential vitamins and adequate protective amounts of calcium, iron and iodine. For the control of weight during pregnancy and for weight reduction in obesity. **Dose:** Usual is 1 tablet 3 times daily taken 30 to 60 minutes before meals. **Sup:** In bottles of 100 tablets.

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Heard at the staff meeting . . .

increases the usefulness of oral aminophylline

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BRISTOL, TENNESSEE

In the form of AMINODROX, three out of four patients can be given therapeutically effective *oral* doses of aminophylline.

This is possible with AMINODROX because gastric disturbance is avoided.

How congestive heart failure, bronchial and cardiac asthma, status asthmaticus and paroxysmal dyspnea can be treated successfully with *oral* aminophylline in the form of AMINODROX.

Aminodrox Tablets contain 1 1/2 gr. aminophylline with 2 gr. activated aluminum hydroxide.

Aminodrox-Forte Tablets contain 3 gr. aminophylline with 4 gr. activated aluminum hydroxide.

Also available with 1/4 gr. phenobarbital.

LETTERS TO THE EDITOR

—Concluded from page 39a

rial to be used for improving your patient's breast contour.

Unfortunately, there has been a great deal of publicity about this sort of material in several lay magazines recently. The use of "inert" plastic sponge (e.g. "Ivalon") has been described for this purpose. It must be inserted surgically. Some animal experimentation has been done, but this is by no means adequate, and its use in humans appears of questionable safety and poor advisability at the present time (see J.A.M.A., week of Dec. 1, 1953 —"The Business of Bolstering Bosoms").

Reports of an injectable plastic substance that can be easily introduced by needle and then molded have come out of Germany. This is apparently called "Palavit." I am not aware of any medical literature on this subject—either in American or foreign journals. It would appear very wise to avoid, and even condemn, its use in humans until extensive, well-controlled animal experimentation by thoroughly reliable investigators has proven its safety. In general, foreign substances are not well tolerated in the body.

In the opinion of the majority of qualified plastic surgeons in this country, a derma-fat graft (taken from the gluteal region, usually) is the procedure of choice for mammoplasty of the type your patient desires. The effectiveness and safety of this procedure is well established. To be sure, it is not an office procedure, and is best carried out by a well trained plastic surgeon.

I sincerely hope that this information may be of some use to you. We are very pleased to receive letters from our readers, and will make every effort to answer any inquiries that you may have.

G. H., M.D.
Surgery Consultant

tested

broad-spectrum therapy

Terramycin®

BRAND OF OXYTETRACYCLINE

established

an agent of choice

in the treatment of a wide range of infections due to gram-positive and gram-negative bacteria, spirochetes, rickettsiae, certain large viruses and protozoa.

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clinical advantages

rapid absorption — Within an hour after oral administration in fasting or non-fasting state, effective serum concentrations of Terramycin may be attained.[1] It is widely distributed in body fluids, organs and tissues and diffuses readily through the placental membrane.[2,3] Immediate evidence of Terramycin's efficacy is often obtained by the rapid return of temperature to normal.[4] Widely used among patients of all ages, this tested broad-spectrum antibiotic is well tolerated,[5] often when other antibiotics are not.[6]

wide distribution

prompt response

excellent toleration

1. Sayer, R. J., et al.: Am. J. M. Sc. 221:256 (Mar.) 1951.
2. Welch, H.: Ann. New York Acad. Sc. 53:253 (Sept.) 1950.
3. Werner, C. A., et al.: Proc. Soc. Exper. Biol. & Med. 74:261 (June) 1950.
4. Wolman, B., et al.: Brit. M. J. 1:419 (Feb. 23) 1952.
5. Potterfield, T. G., et al.: J. Philadelphia Gen. Hosp. 2:8 (Jan.) 1951.
6. King, E. Q., et al.: J. A. M. A. 142:1 (May 6) 1950.

Available in convenient oral, parenteral and topical forms.

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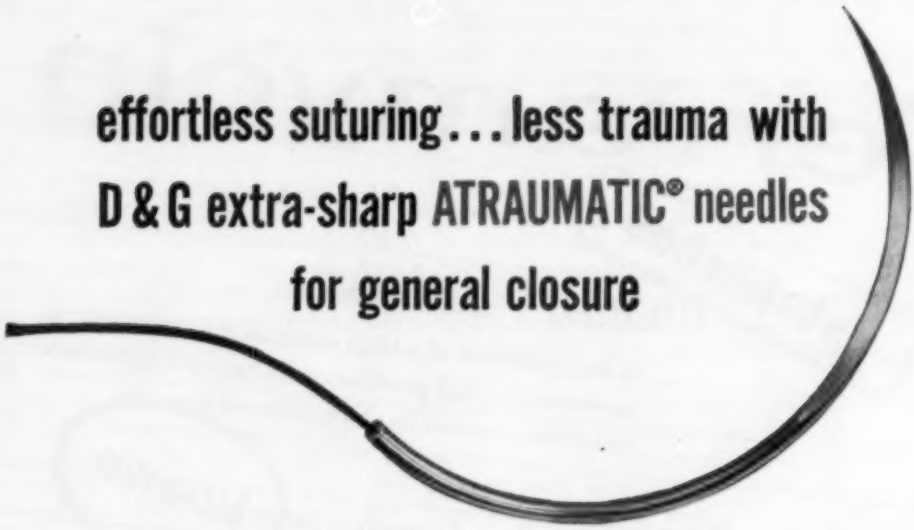
Division, Chas. Pfizer & Co., Inc.

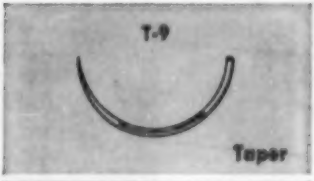
effortless suturing... less trauma with D & G extra-sharp ATRAUMATIC® needles for general closure

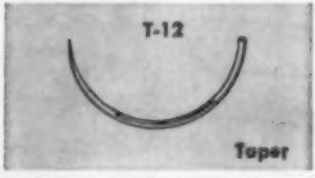


C-10, *three and one-half times enlarged*

Did you know that these 9 temper-tested, hand-finished D & G Atraumatic needles are combined with a *variety* of suture materials? More and more surgeons use them for general closure and ob.-gyn. surgery because there is a fresh, sharp needle for each situation, no tug to clear the needle, less injury to tissues. Important, too—no threading, no dropped needles.

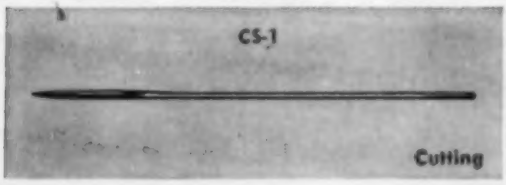
Study the needles illustrated here and ask your suture nurse for your selections. D & G Atraumatic needle-sutures simplify inventory and save nurses' time.





Atraumatic needles replace these eyed needles

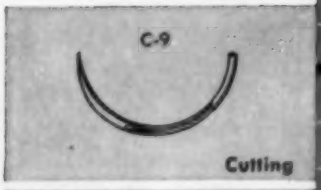
Use ½ Circle Taper Point instead of: Mayo Catgut; Mayo Intestinal; Murphy Intestinal; Ferguson; Kelly. *Use ½ Circle Cutting or Trocar Point in place of:* Regular Surgeons; Fistula; Mayo Trocar; Martin's Uterine.

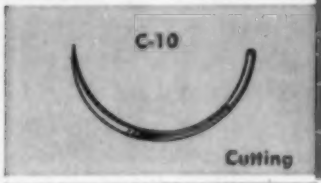


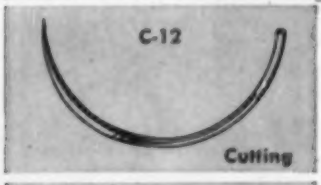
general closure sutures

D & G "TIMED-ABSORPTION" SURGICAL GUT NON-BOILABLE:				
No.	**Type**	**Length**	**Needle**	**Sizes**
1509	A, Plain	27"	T-9	00 to 1
1546	C, Med. Chromic	27"	T-9	000 to 2
1508	A, Plain	27"	T-12	00 to 1
1548	C, Med. Chromic	27"	T-12	000 to 2
1561	C, Med. Chromic	27"	T-18	000 to 1
1563	C, Med. Chromic	27"	T-19	00 to 1
1547	C, Med. Chromic	27"	C-9	000 to 2
687	C, Med. Chromic	27"	C-10	000 to 2
689	D, Extra Chromic	27"	C-10	00
685	D, Extra Chromic	27"	C-12	0 to 2
693	C, Med. Chromic	27"	R-1	00 to 1
691	D, Extra Chromic	27"	R-1	00, 0

ANACAP® SILK:				
No.	**Material**	**Length**	**Needle**	**Sizes**
1378	Black Braided Silk	30"	C-9	000 to 1
1379	Black Braided Silk	30"	T-9	000 to 1
1380	Black Braided Silk	30"	CS-1	000, 00, 0
1397	Black Braided Silk	30"	T-12	000 to 2







Need program material for staff meetings?
Request films from D & G Surgical Film Library.
Write for catalog.

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Viso-Cardiette Interpretation

Only an *accurate* electrocardiogram will provide the physician or cardiologist with the true information that he seeks. And from the abnormalities of a 'cardiogram the abnormalities of the corresponding portions of the heart can be read. Likewise Viso records present a 'cardiographic pattern which mirrors the true worth of the instrument.

Performance of the Viso means the extremely simplified manner in which records are obtained. Routine testing time, patient connection included, averages about seven minutes.

Quality of appearance of the Viso is an outward indication of a quality within. And its inward quality of construction conduces to the Sanborn *quality of results.*

Reliability of the Viso is practically assured by the Sanborn background of over *thirty years* of ECG design and manufacture. Simply ask any Viso owner about Viso!

Service by Sanborn is something to be sure of. A network of offices includes *thirty* in centrally located cities throughout the country, and exclusive Service Helps by mail are available to *every* owner.

Trial Plan the Viso way means your privilege to test a machine *in your* practice for 15 days *without any obligation whatsoever.* Write for details and descriptive literature.

SANBORN COMPANY
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Fellows Chloral Hydrate

CAPSULES

NON-BARBITURATE
NON-CUMULATIVE
TASTELESS
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3¾ gr.
Daytime sedation – *without hangover*

7½ gr.
Restful sleep – *without hangover*

℞ – specify *Fellows* for the *original*, stable, hermetically sealed soft gelatin capsules Chloral Hydrate.

Available – 3¾ gr. (0.25 Gm.), bottles of 24's and 100's
7½ gr. (0.5 Gm.), bottles of 50's

Samples and literature on request

pharmaceuticals since 1866

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New York 14, N. Y.

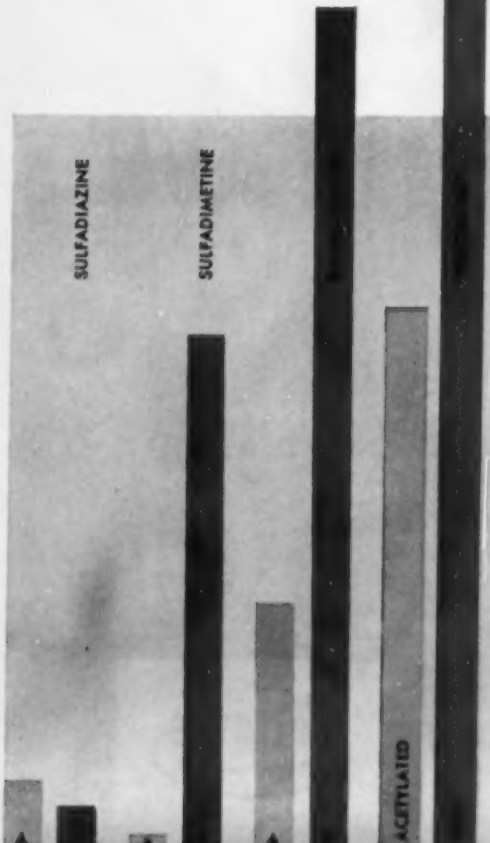
Fellows
MEDICAL MFG. CO., INC.
Pharmaceuticals

SUITABILITY *depends upon* SOLUBILITY

Laboratory studies have demonstrated the greater solubility of "Thiosulfil" as compared with the other three leading sulfonamides prescribed in urinary tract infections.
This obvious advantage, added to high bacteriostatic activity and a low acetylation rate makes

"THIOSULFIL"

the safest and most effective sulfonamide yet presented for urinary tract infections



Solubility comparison at pH 6 in human urine at 37° C.

- **Rapid transport to site of infection for early and effective urinary concentration**
- **Rapid renal clearance**
- **Minimum toxicity**
- **Minimum risk of sensitization**
- **No alkalinization required**
- **No forcing of fluids**

"THIOSULFIL"®

Brand of sulfamethylthiadiazole

SUSPENSION
No. 914 —
0.25 Gm. per 5 cc.
Bottles of 4 and
16 fluidounces

TABLETS
No. 785 —
0.25 Gm. per tablet
Bottles of 100
and 1,000

New York, N. Y. • Montreal, Canada

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5403

among the candidates for COMBANDRIN*

PROTEIN ANABOLIC STEROID HORMONE COMBINATION

...tired elderly patients

With Combandrin, the tired, elderly patient lacking the metabolic support supplied in earlier years by gonadal hormones can often be made stronger, more alert. Formation and retention of protein are promoted, aging bone can be given a "new lease" on life, and mental and emotional reactions may be favorably influenced. More persons can "live"—not merely exist—in their sixties, seventies and eighties. For, the overall results of Combandrin therapy (balanced androgen-estrogen steroid therapy) in the aged "is a lessening of the degenerative state . . ."

Kountz, W. B.: Ann. Int. Med. *35*:1055, 1951.

SUPPLIED: Each cc. contains 1 mg. estradiol benzoate and 20 mg. testosterone propionate in sesame oil, for intramuscular injection. In single-dose disposable Steraject® cartridges and in 10 cc. multiple-dose vials.

Also, Combandrets® — androgen-estrogen combination in convenient tablet form for absorption by transmucosal route.

PFIZER SYNTEX PRODUCTS

Pfizer

PFIZER LABORATORIES, *Brooklyn 6, N. Y.*

DIVISION, CHAS. PFIZER & CO., INC.

*TRADEMARK

How Carnation protects the baby's formula from farm to bottle

Guards Your Recommendation Five Important Ways

(1) Here, at the famous Carnation Farms near Seattle, Carnation's vigilance begins.

Cattle from the world-champion Carnation bloodlines are shipped to Carnation supplier herds throughout America.

Thus, daughters of such famous champions as Carnation Ormsby Madcap Fayne and Carnation Homestead Daisy Madcap help in improving the milk supply of Carnation plants.

A NEW IDEA

More and more physicians are suggesting the use of reconstituted Carnation Milk during the transition period between bottle and cup, to avoid digestive upsets and encourage baby's ready acceptance of milk from the cup.

THE MILK EVERY DOCTOR KNOWS

(2) Supplier herds and equipment are inspected regularly by Carnation Field Service Men. Only milk meeting Carnation's high standards is accepted.

(3) In the Carnation Laboratories, continuing research guards the purity and nutritive values of Carnation Milk – develops new, improved processing methods.

(4) Every drop of Carnation Milk is processed by Carnation alone, in Carnation plants, to Carnation standards, assuring constant high quality, uniformity.

(5) Carnation store stocks are date coded, inspected regularly by Carnation salesmen to assure freshness and high quality when a mother makes her purchase.

VERATRUM
THERAPY
WITH
POTENCY
THAT IS
MATHEMATICALLY
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a new
achievement
in the
management of
hypertension

VERALBA marks a milestone in the treatment of hypertension, for it is the only veratrum alkaloid ever standardized *completely* by chemical assay. ¶ This means unvarying potency, so essential to true control of the hypertensive patient... plus a more exact forecast of patient response. ¶ When effective dosage of VERALBA is once determined for the individual patient... it remains, with rare exceptions, the actual maintenance dose. ¶ Vasodilatation is induced without ganglionic or adrenergic blockade... without direct smooth muscle depression... without deranging those mechanisms which control blood distribution and which normally prevent postural hypotension. Here is a notably safe, efficient approach to the management of hypertension.

VERALBA®

BRAND OF PROTOVERATRINES A AND B

Supplied: Tablets of 0.2 or 0.5 mg., uncoated and grooved, in bottles of 100.
Also as Veralba Solution, in 10 cc. multidose vials.

PITMAN • MOORE COMPANY, DIVISION OF ALLIED LABORATORIES, INC. INDIANAPOLIS, INDIANA

When she's *courted* by *Temptation*

When the dieter rationalizes that good times aren't *good* times without good food, it's time to prescribe Desoxyn Hydrochloride. One 2.5-mg. or 5-mg. tablet before breakfast and another before lunch will keep lusty appetites in check and at the same time boost dieting morale with a sense of well-being. Besides obesity, Desoxyn is indicated in depressive states accompanying illness, convalescence or the menopause...also as an adjunct in chronic alcoholism and cerebral arteriosclerosis. Available at all prescription pharmacies in tablets, elixir and ampoules. Abbott

prescribe...

DESOXYN® *Hydrochloride*
(METHAMPHETAMINE HYDROCHLORIDE, ABBOTT)

The Cross-Eyed Child*

R. D. HARLEY, M.D.
Atlantic City, N. J.

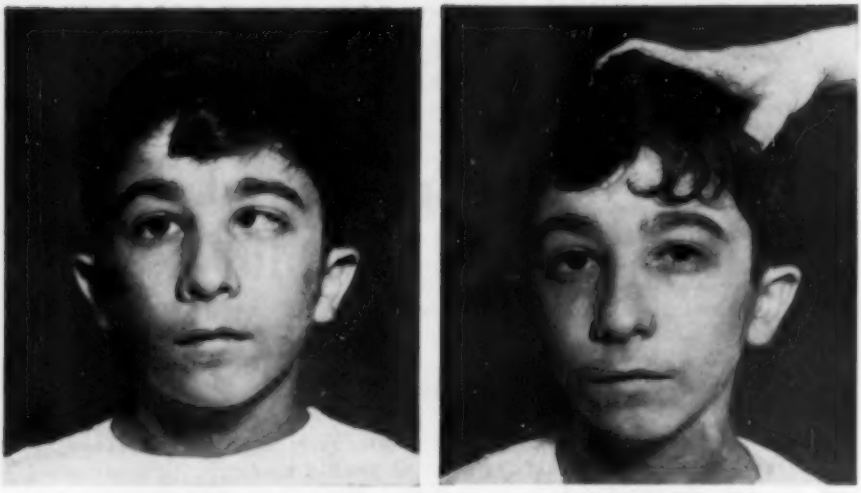
It is shocking to find that a great number of people still believe that nothing can be done for strabismus until the child is old enough for a subjective examination. Unfortunately, some physicians are of the same opinion. This belief should be eradicated and replaced by a truer concept. The family physician and the pediatrician play a vital role in instructing the parent and in guiding the cross-eyed child. It must be realized that if a case is neglected, a functional cure may be impossible and only a cosmetic improvement of the deformity can be expected.

The Ideal Time to begin correction of convergent strabismus is immediately following recognition of the ocular disability. Study of 100 cases showed that in thirty of these, a period of two to five years had elapsed before the strabismus was brought to the attention of an eye physician. What accounted for this delay? Reasons given by the parents fell into three categories: (1) Parents' failure to recognize the crossed-eye. (2) Acceptance of advice to wait. (3) Parents' or relatives' fear of operation. The problem of the cross-eyed child begins with the parents in many cases. There is an increasing tendency for the discussion of such subjects in popular magazines but unfortunately the facts fail to reach many who need the information. The urgency for the early recognition and the treatment of strabismus cannot be overstressed if we are to obtain good functional results.

Mothers and fathers quite naturally want their children to be perfect. It is always a shock to find that their child's eyes are crossing. The eyes of a new born infant may cross periodically or even diverge. This may occur normally up to the age of six months. About this time, the eyes should begin to exhibit coordination and parallelism in the "eyes front" position as they begin to study everything in their vicinity. If a child's eye remains crossed beyond this time it signifies a real disability and demands attention. Many parents fail to recognize that the child's eye is crossed and valuable months of treatment are lost. Frequently a relative or neighbor is the first one to suggest that the eyes are not functioning together and the parents are then urged to seek medical advice.

Many years ago we frequently heard the suggestion "Don't worry yourself about it, the child will grow out of it". This dangerously wrong advice is not so common any more. Unfortunately for the child, it has resulted in many useless eyes that might have been saved. Fewer than one per cent of children who are really cross-eyed ever "outgrow" the defect. The

* From the Department of Ophthalmology, Temple University Medical School, Philadelphia, Pennsylvania.

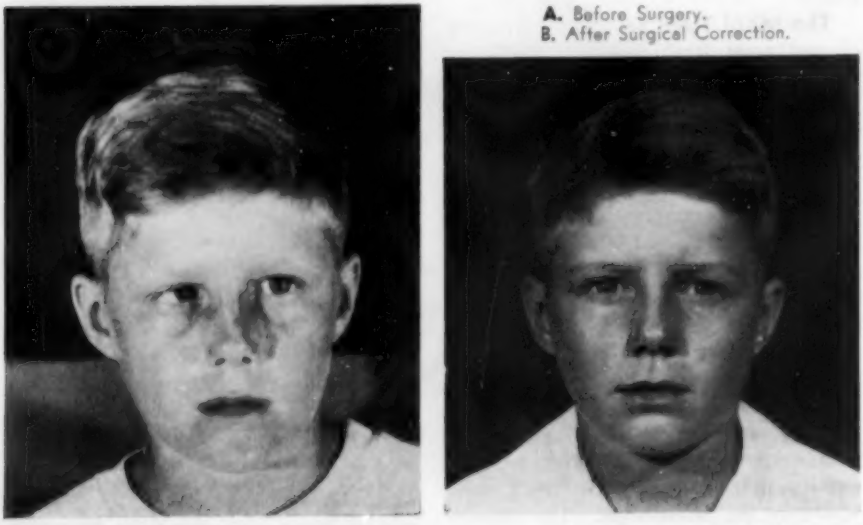


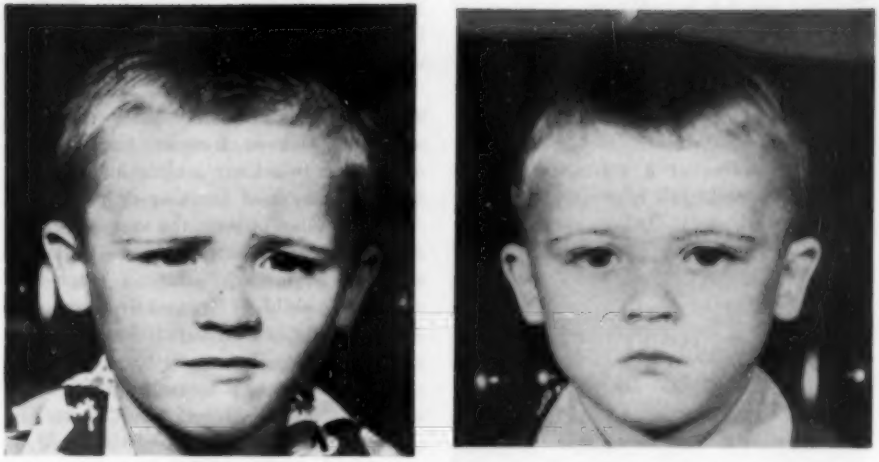
A. Before Surgery. B. After Surgical Correction.

Fig. 1 Boy age 10—Alternating convergent strabismus for 6 years. Wore glasses. Post-operative cosmetic result good but functional result poor.

Fig. 2 Boy age 6—Had alternating convergent strabismus since age 3½. Functional result good post-operatively.

A. Before Surgery.
B. After Surgical Correction.





A. Before Surgery. B. After Surgical Correction.

Fig. 3 Boy age 4—Convergent strabismus for one year. Good functional result post-operatively.

child's eyes, left unattended, will show some permanent defect in most cases.

One report we commonly hear from parents is that the child had perfectly straight eyes until the age of two or three when, following a childhood illness or a "bad fright", the eyes began to cross. This observation may be entirely correct. It usually indicates to the doctor that the eyes were on the verge of crossing and needed but some minor disability to precipitate an event which was quite likely to happen at any time. Then there is another type of crossing which shows up only after fatigue or following an emotional upheaval. This "intermittent strabismus" frequently progresses to a permanent crossed condition.

Let us suppose, that the parents decide to wait and see if the child will outgrow its crossed eyes. What happens? Aside from the eye disability there occurs significant changes in the child's personality. The child with crossed eyes is obviously different from his playmates. Children are quick to recognize even the smallest change in the normal pattern of other people. They are often unconsciously cruel as they quite openly discuss such defects among themselves. Descriptive nicknames are given to their unfortunate playmates who are different in having crossed eyes.

The cross-eyed child reacts in one of two ways to this severe emotional experience. He withdraws from his group, becomes shy, timid and spends his time with books or in games where he can be master through his own imagination. He suffers from a real sense of inferiority and of "not belonging". Or he becomes loud, boisterous and aggressive, particularly with children younger than himself. He attempts to compensate by assuming qualities which the others do not have or display. Either mechanism for an altered personality may continue into adult life and become permanent if the defect is not corrected.

The Eyes of the New-Born are frequently observed to lack coordination and cross. Even after coordination is present, the infant's vision is not fully developed. Acuteness of vision develops

steadily for the first five or six years of child's life. It requires this time and normal use for the full development of 20/20 sight. If the coordination of the eyes during this critical development period is poor, then one of the eyes frequently remains at a sub-normal visual state. We call this faulty sight amblyopia, or weak sight. Others speak of it as "lazy eye." This "laziness" was really forced upon it. If this poor vision or amblyopia is permitted to remain without treatment beyond the age of six it usually becomes permanent and the sight remains about 20/200 for life. Treatment is by occlusion or blocking off the good eye with a patch or an opaque lens. This forces the poor eye to work. The earlier occlusion is begun, the sooner the poor eye responds and the more likely we are to obtain normal vision.

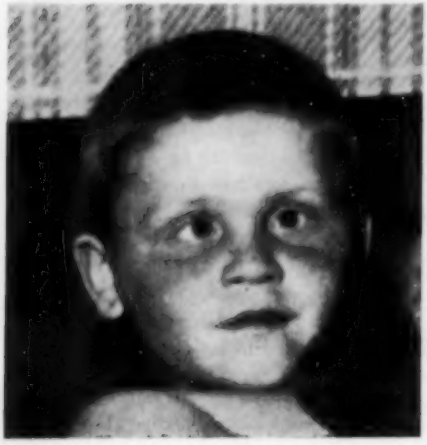
Correction of amblyopia in the preschool child is the most important single therapeutic objective. The final functional result obtained through the use of pre scription lenses, exercises or surgery is primarily dependent on the establishment of equal and normal vision in both eyes. The numerous factors involved in binocular vision all depend on good visual acuity.

The infant's eyes are usually far-sighted. It requires the extra effort of accommodation or focusing on the part of the eyes to achieve a clear image. During the process of focusing or accommodating on close objects, the eyes converge. In the very far-sighted eye the tendency to converge is even greater. Since the cross-eyed child is frequently very far-sighted, there is a strong tendency to over converge.

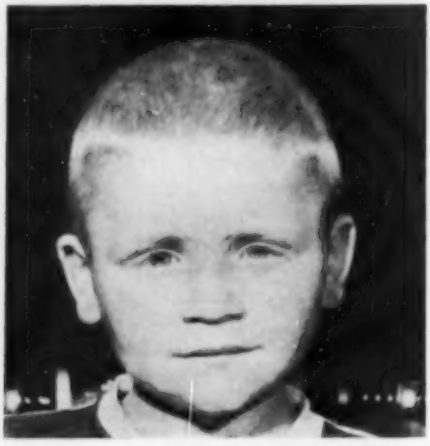
The basic trouble seems to be a faulty or weak "fusion" power. By "fusion" is meant the ability of each eye to look at an object so that each eye receives an image that corresponds to that seen by the other eye. This image picture is relayed to the brain where a single picture is developed and "fused" under normal conditions. If the eyes do not receive a corresponding image for fusion, the brain records two objects. The person then sees double. Then one image must be suppressed. This often takes place in one eye of the cross-eyed person. The fami-

Fig. 4. Boy age 5—Convergent strabismus for 2 years. Orthoptic exercises pre and post-operatively. Good functional result obtained.

A. Before Surgery.



B. After Surgical Correction.



lial occurrence of crossed eyes has long been known. Several factors are involved; an inherent difficulty with fusion is one of them.

Treatment of the Cross-Eyed Child should begin immediately after the condition has been noticed. In general, there are three basic methods for treatment; the use of prescription lenses (with or without patching one eye), eye exercises and surgery. Each case is an individual problem and may be handled by one, two or all three of the methods. Satisfactory results may be anticipated upon the establishment of parallelism and the development of fusion.

Far-sightedness can be corrected with glasses which eliminate the need for excessive focusing. If the crossing of the eyes is due to far-sightedness entirely, corrective lenses may straighten the eyes satisfactorily. If, however, far-sightedness is only a precipitating factor and not the entire cause, glasses will only partly straighten the eyes. The remainder of the crossing requires correction by other methods. The eye which remains consistently crossed for any length of time frequently has sub-normal sight. Before anything further can be done it is important to restore the sight in the crossed eye which is otherwise healthy. If the child is forced to use the "weak" eye by completely patching the other eye, vision may be restored when this procedure is started before the age of five or six. When good sight is present in each eye and prescription glasses fail to straighten the eyes entirely, then an operation is almost invariably required to complete the cure.

We are frequently asked about the advisability of eye exercises. Under the guidance of trained personnel such as an orthoptic technician, eye exercises are useful in the correction of a number of visual and eye muscle defects. But, contrary to some writings on the subject, they are not cure-alls. Eye exercises will never restore normal sight to those suffering from any eye disease; and they will not enable all wearers of glasses safely to throw their spectacles away. Eye exercises do not correct refractive error or so-called "color blindness". Orthoptics is the name given to the procedure which aims for single binocular vision by the stimulation of fu-

A. Before Surgery.

Fig. 5 Girl age 22—Convergent strabismus of right eye since age 4. Vision not improved beyond 20/200. Following surgery cosmetic result good but functional result unchanged.

B. After Surgical Correction.

sion and the coordination of eye movements. Exercises may range from simple ones, performed at home, to complex ones requiring the use of elaborate and expensive machines supervised by professional technicians. Orthoptic exercises are in essence, educational methods whereby a poorly developed fusional apparatus is stimulated to normal function.

When Surgery is Indicated it is essential that it be accomplished as soon as possible. Best functional results are obtained before the child has entered school. Surgery aims at one specific effect: to place the eyes in a good position so that the reflexes for coordinated vision may work more advantageously. When muscle surgery is done in later years, the eyes can still be straightened satisfactorily but the functional result leaves much to be desired. The operation is not particularly difficult or dangerous. General anesthesia is usually employed for children but adult muscle cases are frequently done under local anesthesia. The eyeball itself does not have to be opened. All operations on eye muscles, no matter how elaborate the medical name given to them, are either shortening or lengthening operations on the extra-ocular muscles. The operation will not affect the vision in either eye. The question is frequently asked, "Can my child go without glasses after the operation?". The answer depends largely on the refractive error or the degree to which the eyes are dependent on lenses for adequate sight and relaxation of the eyes. Each child presents an individual problem. Most eye physicians are guarded in their answer as to the future need of glasses.

Summary

There is a general agreement among those who are best qualified that children with crossed-eyes should have their eyes straightened early in life. Just as you would correct a child's lame leg when possible before he learns to walk, so would you correct a child's crossed eyes before he needs to use them together as a team. This goal is attainable for virtually every cross-eyed child who is handled in a manner consistent with present day concepts.

101 South Indiana Avenue

AN EXERCISE IN DIAGNOSIS — THE CASE REPORTS

IN addition to our regular quota of orginal articles, "Refresher" articles and departments, this issue, and every issue, contains selected Case Reports from the Clinico-Pathological Conference at New York University-Bellevue Medical Center. You will find them on pages 134-141. We recommend these studies as interesting and stimulating.

Ophthalmic Injuries and Diseases in General Practice

This summarization attempts to cover the essential information on the subject, including therapy, and is designed as a time-saving refresher for the busy practitioner.

PART 2

D. *Follicular Conjunctivitis.* Several types of conjunctivitis are included in this category, the folliculitis being the characteristic common factor. While follicles may sometimes be found in the normal conjunctiva, especially in the upper and lower fornices, the number may be increased in children. This is usually part of a general adenoid hypertrophy. Bacterial infection may be superimposed, but this clears upon treatment, leaving the underlying folliculosis as before. Follicular conjunctivitis must also be dissociated from the papillary hypertrophy of allergic conjunctivitis. There are four types of follicular conjunctivitis: acute, chronic, allergic, and trachoma.

Acute follicular conjunctivitis may be one of three distinct conditions, that receiving most attention in recent years being *epidemic keratoconjunctivitis*, a viral disease entity. It appears in acute form, with great initial severity, with edema of the eyelids and perhaps transient membrane or pseudomembrane formation. The scanty secretion is composed almost entirely of mononuclear cells which clearly differentiates it from bacterial conjunctivitis. About a week after onset most patients have visible punctate corneal lesions that tend to concentrate in the pupillary area and thus reduce vision. Enlargement of the preauricular and sometimes the submaxillary and submental lymph nodes is characteristic. Acute symptoms last from ten day to three weeks, after which inflammation regresses in some weeks and leaves only the corneal infiltrates then may clear entirely or leave residual maculae of the cornea. Prognosis for return of normal vision is excellent. Aureomycin and Terramycin, particularly the latter, appear to have some value when used topically in preventing corneal lesions and controlling secondary infection. Three cases of epidemic keratoconjunctivitis cleared in 24 hr. with the use of cortisone drops.[22] Because of the responsiveness of other similar conjunctivitides to cortisone, this agent would seem worth a trial. The occasional greater effectiveness of hydrocortisone in some ocular conditions should be borne in mind.[23]

Acute follicular conjunctivitis Beal, probably caused by a virus, tends to occur in mild epidemics, especially in the summer. The follicles develop rapidly in the conjunctiva of the lower lid and fornix but generally spare the upper tarsal con-

junctiva. While the bulbar conjunctiva may be inflamed, the cornea never reveals infiltration or epithelial staining and extension of the limbal vessels does not occur. The preauricular lymph node is usually swollen and may be slightly tender. The scanty secretion is made up almost entirely of mononuclear cells. The follicles are prominent as a rule but may be overshadowed by the cellular infiltration and the consequent papillary hypertrophy. The acute phase lasts about a week, after which the conjunctiva returns to normal in about three weeks. Unilateral localization is quite common, but in some cases the disease occasionally spreads to the other eye in about 5 days. No specific treatment is known and applications of antiseptics do not seem to shorten the disease. The use of cortisone in Beal conjunctivitis has apparently not been reported; however, other types of conjunctivitis accompanied by folliculitis, notably vernal conjunctivitis, do respond promptly as a rule.

The Third Type of acute follicular conjunctivitis is *adult inclusion conjunctivitis*. This was formerly commonly transmitted in swimming pools, leading to the name "swimming pool conjunctivitis," but this source can be eliminated by proper chlorination of the water. It may also be transmitted by the fingers, since the virus is of genito-urinary origin. Adult inclusion conjunctivitis differs from the infant form of the disease (described above) in being an acute follicular instead of an acute papillary conjunctivitis, although in severe cases cellular infiltration and papillary hypertrophy may mask the folliculosis. In the early stages the exudate contains a predominance of polymorphonuclear cells, an important differentiating point from the predominance of mononuclear cells in acute follicular conjunctivitis Beal. Moreover, typical cytoplasmic inclusion bodies are found in epithelial scrapings as in the infantile form of the disease. The condition lasts for 3 months to a year, leaving no residuals.

Both oral and topical use of sulfonamides is often required, as topical use alone does not usually provide adequate ocular concentrations of the drug. In a recent small series of cases[28] oxytetracycline, chlortetracycline and sulfacetimide ointment given t.i.d. for 3 weeks readily suppressed clinical symptoms. Repeated courses were sometimes necessary. In 4 patients suspected of having the disease despite negative conjunctival scrapings, use of cortisone ointment increased the severity of symptoms and inclusion bodies were then found in the scrapings.

Chronic follicular conjunctivitis is now classified as a clinical entity, although it may sometimes be confused with other types of chronic conjunctivitis in which follicles appear but are not characteristic of the disease. It differs from the acute disease in mildness of development and chronic persistence. Although there is very little secretion and symptoms are minor, the follicular hypertrophy involves the entire conjunctiva of the eyelids and fornices. Folliculosis, on the other hand, usually spares the upper tarsal conjunctiva. The disease heals spontaneously in from 2 to 3 years. Apparently close contact and poor hygienic conditions favor the dissemination since it is common in institutions, particularly orphanages. Local medication is ineffective; mechanical expression of the follicles may possibly shorten the course. One report[8] of the successful use of cortisone in chronic follicular conjunctivitis has been found.

A variety of causes may lead to *toxic* or *allergic folliculitis*. The child's conjunctiva may respond to toxic stimuli by follicle production, as in staphylococcal or diplobacillary conjunctivitis, which in adults do not cause folliculitis. But folliculitis complicated by infection does not clear up with control of the infection. Prolonged use of physostigmine and pilocarpine, for example, may lead to a follicu-

lar conjunctivitis. This differs strongly from the allergic reaction to atropine which consists of itching, papillary hypertrophy of the conjunctiva, and dermatitis, with positive patch tests. These conditions are absent in the reaction to physostigmine and pilocarpine. While treatment of allergic folliculitis with cortisone or hydrocortisone has not been specifically noted, Agatston[2] treated cases of allergic conjunctivitis due to atropine, penicillin and sodium sulfacetamide drops. The reaction to the latter did not improve, but the penicillin and atropine reactions cleared within a few days of beginning local cortisone therapy. Allergic reactions of penicillin and atropine also responded promptly to the newer hydrocortisone.[35] others [3, 6] had similar encouraging experiences with cortisone therapy of allergic reactions of the conjunctiva and cornea. Moreover, hydrocortisone is sometimes effective upon local use after cortisone has failed.[35A] Duke-Elder,[7] however, had more equivocal results in a series of 19 patients reacting adversely to atropine, hyoscine, sulfacetamide, and penicillin, when cortisone was added to specific treatment. It is clear that, at least in some cases, it is possible to continue the use of some drugs in eyes that have become sensitized if cortisone or hydrocortisone is also given.[31, 35A] Other palliatives in allergic conjunctivitis include local anesthetics, vasoconstrictors and antiseptics, all often being used together. Vasoconstrictors such as phenylephrine or ephedrine are particularly important since they allay the acute symptoms of pollen allergies more effectively and rapidly than any other medicament.[35A]

Trachoma, still the most prevalent eye disease in certain countries and common among American Indians and in the mountainous areas of the southern United States, is a highly contagious, chronic viral conjunctivitis, the course of which is divided into four stages. However, because of the many variations in its appearance, subsequent development and ultimate consequences, only a succinct summary of its clinical characteristics and treatment can be given here. The disease is prone to exacerbations and remissions; follicular hyperplasia of the palpebral subconjunctival tissue, corneal vascularization and cicatricial shrinkage of the lids are the most characteristic features. The first signs are conjunctival injection, edema of the lids, photophobia and lacrimation, usually of both eyes, with little purulent secretion, all of which may suggest an ordinary form of conjunctivitis. In a week or so, small follicles appear in the conjunctiva of the upper lids, gradually increasing in both size and number with formation of yellow-gray, semi-transparent "sago grain" granulations surrounded by inflammatory papillae. About this time a pannus begins to form with invasion of the upper half of the cornea by infiltration of loops of vessels from the limbus, sometimes involving the whole cornea with consequent limitation of vision to light perception. In uncomplicated cases spontaneous regression of the pannus occurs with restoration of corneal transparency. The stage of follicular hypertrophy and pannus formation lasts from several months to a year or more, depending upon treatment. After this period, the follicles and papillae slowly shrink with replacement by scar tissue which may cause entropion and obstruction of the lacrimal ducts. In ischemic areas of the pannus ulcers may develop, leaving corneal scars that seriously interfere with vision. The final stage of trachoma is an inactive period when inflammation, injection and hypertrophy have disappeared leaving only scar tissue and the physical changes due to them. Depending upon the location of such scars, the eyelids may be deformed, drainage imperfect, with ptosis and varying degrees of visual inpairment.

Diagnosis in the earlier stages of trachoma may well be difficult because of symptoms and signs in common with

more usual forms of conjunctivitis. The finding of minute granular cytoplasmic inclusion bodies in Giemsa-stained conjunctival scrapings helps to differentiate the disease from acute catarrhal conjunctivitis, although inclusion bodies are also found in inclusion conjunctivitis. The subsequent development of the disease, however, is clinically distinctive. While vernal conjunctivitis resembles trachoma in the follicular hypertrophic stage, identification of eosinophiles in the discharge, absence of inclusion bodies in the epithelial scrapings and the milky flat tops of the papillae suggest the vernal condition. Infectious conjunctivitides lasting two months or longer may cause difuse infiltration of the conjunctiva of the cul-de-sac, often with follicle formation and papillary hypertrophy of the tarsal conjunctiva. But only trachoma produces such intense changes with the exception of gonorrheal and tuberculous disease; in gonococcal blenorrhea diagnosis is made long before the characteristic changes of trachoma are evident, and in the tuberculous condition lesions are confined to one part of the conjunctiva, usually with ulcer formation. In milder cases, especially in children, diagnosis may be even more difficult. Chronic persistence of marked conjunctivitis in children should always arouse suspicion of trachoma.

In therapy, the sulfonamides have changed the whole picture of trachoma, for excellent results are obtained with several of these agents by systemic and oral administration. Sulfadiazine or a sulfonamide mixture may be given by mouth, while sodium sulfacetamide or sodium sulfadiazine is applied in drops or ointment form. After a 10 year study of over 3500 trachomatous patients treated with available sulfonamides and antibiotics, Siniscal[26] recently reported that the following sulfonamides were effective against trachoma: sulfanilamide, sulfapyridine, sulfathiazole, sulfadiazine, sulfacetamide and its sodium salt, Sulfamylon, a combination of sulfadiazine, sulfamerazine and sulfathiazole, and sulfisoxazole diethanolamine. The treatment now used at Missouri Trachoma Hospital follows: local instillation q. 2 h. of sulfisoxazole diethanolamine, 4.3 per cent solution, or sodium sulfacetamide, 10 per cent solution, for 10 days to 3 weeks; sulfisoxazole diethanolamine orally q.i.d. according to age and weight for the first 7 days; 10 per cent ophthalmic ointment of the latter agent or of sodium sulfacetamide applied each night for the entire period of treatment. As specific cures Siniscal found the antibiotics ineffective *per se*, but penicillin, bacitracin, streptomycin, chloramphenicol, aureomycin and terramycin were excellent for clearing up any associated bacterial infection.

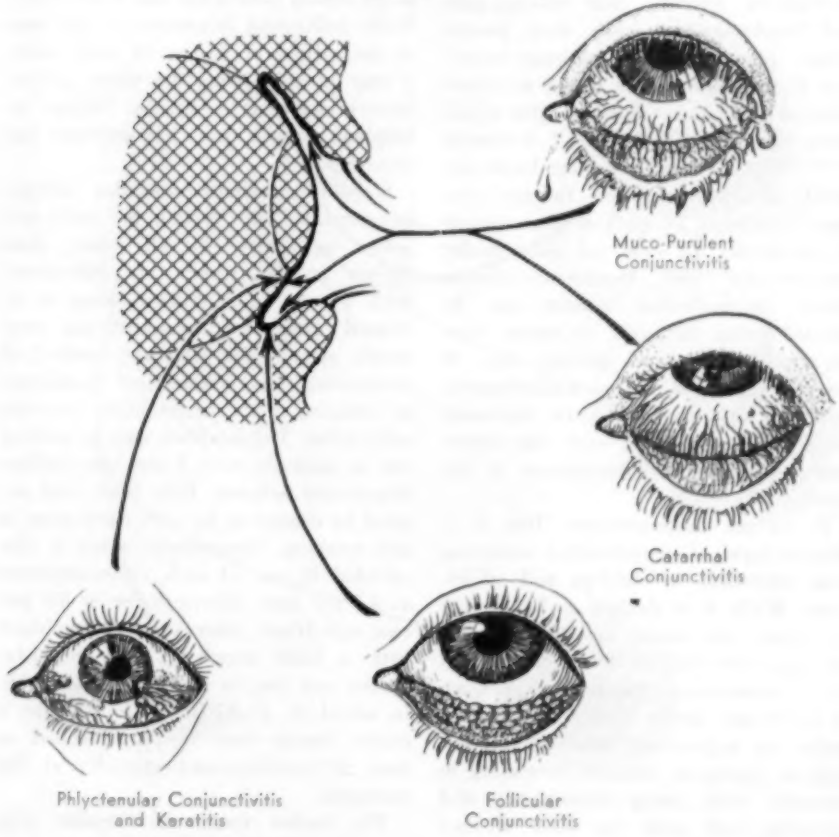
In the few cases resistant to treatment, the copper sulfate stick is applied once daily to the everted and anesthetized lids, taking extreme care not to touch the cornea, or 1:2000 mercuric chloride solution may be used on cotton-wound applicators. A 5 per cent copper citrate ointment may be instilled twice daily. In secondary iritis due to progressive pannus or ulcer, atropine should be used locally. Surgical treatment of resulting malformations may be advisable.

Few cases of trachoma treated with cortisone have yet been reported. Arruga[27] had favorable results in 3 patients treated locally with cortisone. Duke-Elder[7] found marked reduction of vascularity with considerable relief of symptoms in one case of long-standing trachomatous pannus. It has also been used to decrease the inflammatory reaction and combat the secondary uveitis of the disease. [28] Gordon [9] considers that "this field would seem to be a fertile one for investigation." However, systemic use of cortisone is definitely contraindicated [29].

E. *Phlyctenular Conjunctivitis and Keratitis* This disease, occurring most often in children, is characterized by phlyctenules (small, hard, elevated le-

sions) appearing singly or in groups on the limbus or, less often, on the cornea and bulbar conjunctiva. The lesions are multiple in children but isolated phlyctenules may appear in adults. Relapse is common, with the eventual involvement of the cornea. Individual lesions on the conjunctiva ulcerate and heal during a 10 to 14 day period without scarring but corneal lesions leave localized cicatricial areas. If the latter are numerous, a pannus develops which tends to be irregular and, unlike the pannus of trachoma, is usually more extensive below than above. The ulcers may become infected and progress into deep spreading lesions that sometimes perforate and cause marked visual reduction. In the conjunctival condition, tearing and itching may be only mild but blepharospasm, severe tearing, photophobia and pain are more prominent when the cornea is affected. The disease occurs typically in young children who are undernourished or suffering from recent severe illness. There is a definite association with tuberculosis but it is now believed that the lesions are manifestations of bacterial allergy, an atopic reaction of a hypersensitive conjunctiva or cornea to an allergen, most usually the tubercle bacillus, staphylococcus or other bacteria.

Fig. 1. Some Diseases of the Conjunctiva



In treatment every effort should be made to improve the general health, with provision for a balanced diet and adequate vitamin intake. Dietetic therapy alone may arrest the disease. It is well to consider the affected child as potentially tuberculous. Bacterial infection, which may set off the successive crops of phlyctenules, must be elminated. Previously the best treatment was a sulfonamide for control of the associated infection which is often staphylococcic. A 1 per cent yellow oxide of mercury ointment may be applied for uncomplicated conjunctival lesions. With corneal involvement, 1 per cent atropine drops should be used to dilute the pupils and sufacetamide or sulfadiazine sodium drops for the infection. Phenacaine and epinephrine ointment will relieve pain and blapharospasm, while dark glasses reduce photophobia. In patients refractory to this treatment, a course of tuberculin or typhoid vaccine may give relief. Recent studies with hormonal treatment [4,7,15,16,25,29,30,31], indicate that local cortisone and hydrocortisone therapy produces remission or marked improvement in practically all cases of phlyctenular conjunctivitis and keratoconjunctivitis. Acute uncomplicated attacks can be aborted within 48 hours, no matter what the initial degree of severity. But in cases complicated by a staphylococcic infection, adjunctive antibiotic treatment must be given.[29] The very few recurrences yield to readministration of the hormone.[30]

F. *Vernal Conjunctivitis*: This is a chronic form of conjunctivitis occurring most commonly in children and adolescents. While it is thought to be allergic in origin, the usual investigations for allergies often fail to demonstrate significant sensitivities despite the presence of an allergic family history. The disease makes its appearance with the first hot days of spring or summer, increasing in intensity with rising temperature and subsiding only with the onset of cool weather. Intense itching of the eyes and typical pathological appearances differentiate the vernal form from other types of infectious conjunctivitis. Tearing, photophobia, conjunctival injection and a stringy secretion are prominent. Smears from the discharge contain numerous eosinophils. Either the palpebral or bulbar conjunctiva, or occasionally both, may be involved. The palpebral form is characterized by giant, pale pink to grayish papillae with a cobblestone appearance in the upper tarsal conjunctiva, sometimes extending to the lower palpebral conjunctiva. The uninvolved tarsal conjunctiva has a milky haze and fine pseudo-membranes during the active stage of the disease. The bulbar or limbal form shows limbal infiltration and hypertrophy. While infiltration is confined to the area of the palpebral fissure in mild cases, it may extend around the whole circumference and onto the cornea. The not infrequent corneal ulcers are stubborn and recurrent.

Standard treatment includes allergic investigation, with testing for mold and pollen sensitivity, in all cases, even though positive results are infrequent. With positive tests, desensitization is indicated. Otherwise, treatment has been purely symptomatic and any method of constricting the conjunctival capillaries or reducing their permeability provides some relief. The secretion may be washed out at intervals with 3 per cent sodium bicarbonate solution. Cold boric acid applied by eyecup or by cold compresses is also soothing. Symptomatic relief is also afforded by use of such vasoconstrictors as 0.5 per cent phenylephrine or 0.5 per cent ephedrine, either alone or combined with a local anesthetic. The antihistaminics may also be useful. For those able to afford it, a change of location to a cooler climate may be recommended as may air conditioning, especially of the bedroom.

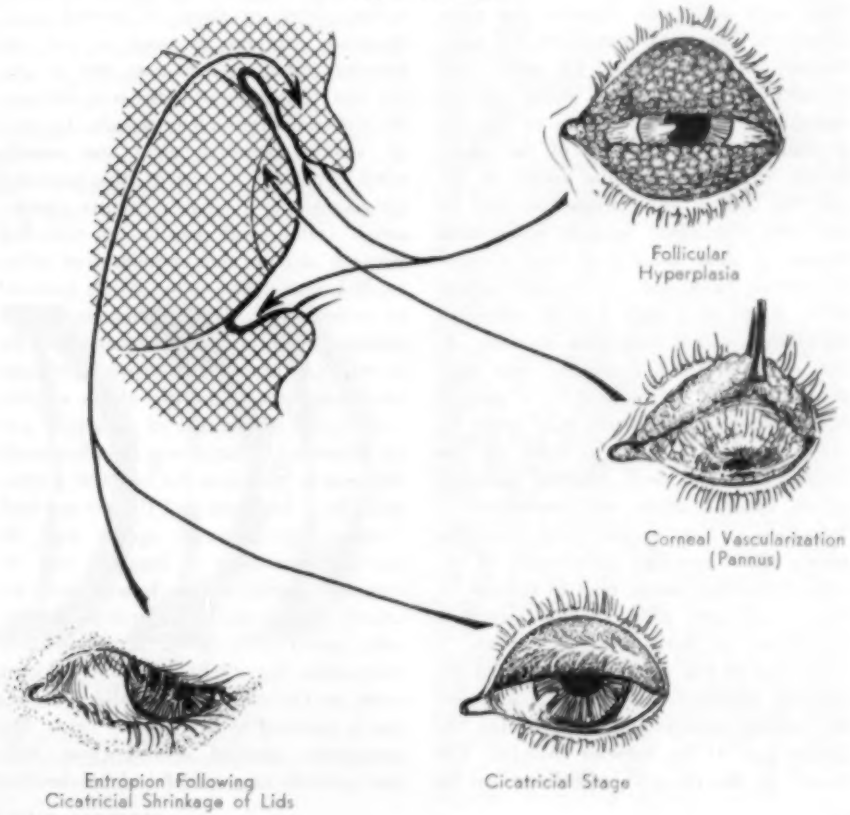
The recent therapeutic results with

cortisone applied topically have varied from mediocre [12,31] to extremely favorable.[5,11] Scheie [15] obtained remission in all 6 of his patients, while others[5,12,19,31] had some failures among more numerous remissions. Gordon [9] was able to control one severe, long-standing case by cortisone drops, cortisone ointment at night, plus occasional use of the drug orally. Systemic cortisone is recommended by Leopold [4] for late stages of the disease and topical cortisone for early stages. Duke-Elder [7] considers that continuation of local cortisone in modified dosage may be necessary during the whole season in which symptoms are likely to occur.

A marginal ulcer in vernal catarrh responded dramatically to hydrocortisone, as did the keratitis.[29] Four patients with vernal conjunctivitis secondarily infected had not been appreciably helped by topical cortisone and antibiotics, but dramatic and continued relief of symptoms occurred with topical hydrocortisone.[25]

Corneal Conditions As a rule, diseases of the cornea require greater diagnostic facilities and therapeutic maneuvers than are available in general practice, and patients with corneal involvement are wisely referred at once to an ophthalmologist. Neverthless, the recent advances in treatment suggest that certain corneal

Fig. 2. Trachoma



conditions will become amenable to more rapid control than was previously possible.

While the dividing line between inflammatory and degenerative corneal diseases is far from clear-cut and the term keratitis may sometimes be loosely used to cover both types, for our purpose corneal conditions are divided into two categories: inflammatory conditions or keratitis and noninflammatory conditions. No doubt the most important, or at least the most hopeful, from the viewpoint of treatment are the several types of keratitis, including corneal ulcer.

Corneal ulcer, a localized necrosis of the corneal epithelium, may be due to known or unknown causes, among the former being infections complicating foreign bodies and abrasions, acute and chronic conjunctivitis, trachoma, dacrocystitis, acute infectious diseases and virus infections. The usual symptoms are pain, lacrimation, photophobia, lid spasm and blurring of vision, all of which may be variable in degree and more or less independent of the severity of the ulcer. Before examination of the cornea in detail, the adnexa and conjunctiva must be carefully scrutinized because pre-existent disease of these areas is so often a cause of corneal ulceration. A typical corneal ulcer starts as a dull grayish delimited infiltration which undergoes necrosis. At this stage it has a depressed floor with sloughs and is surrounded by a grayish halo. Adventitious vessels may often be seen growing in from a point on the limbus near the ulcer. Shallow marginal ulcers, often multiple, may coalesce with formation of a threatening ring. Dandritic ulcers show knot-like protrusions of the many branched lesion, tend to relapse, or heal in one area while another branch of ulceration is developing. Hypopyon, a collection of pus in the lower part of the anterior chamber, can often be observed by looking obliquely downward into the lowest part of the anterior chamber. The break in the corneal epithelium can be demonstrated by the use of one or two drops of 2% fluorescein, followed by flushing with normal saline solution. Complications of ulcer include iritis, perforation, hypopyon, inflammation of the entire eye and complete destruction of the globe. While superficial ulcers usually heal without after-effects, those involving deeper layers heal with fibrous replacement and consequent diminution of vision.

Erosions 1 or 2 millimeters in diameter due to aseptic removal of foreign bodies usually heal within a few days when treated with a mild antiseptic ointment and use of a snug patch. Larger lesions due to trauma, particularly when infected, require a sulfonamide, antibiotic or other antiseptic ointment and the mandatory patch. Fluorescein should be used daily until healing is found to be complete. In severe ulcers or those of several days' duration, atropine is used to put the anterior uveal tract at rest and to discourage formation of adhesions between the iris and anterior lens capsule. In cases of rapidly spreading ulcer and usually when hypopyon is present, the base and margins of the ulcer may require cauterization (after local anesthesia) with full strength carbolic acid or tincture of iodine applied with a fine cotton point, followed by immediate irrigation. Iodine is thought especially useful for resistant dendritic ulcers. (A new iodine-vapor applicator for treatment of dendritic ulcers appears to offer the advantages of simplicity and effectiveness.)[32] Anti-biotic or sulfonamide ointment is placed in the eye 3 or 4 times daily for a few days and the eye patched. Systemic antibacterial agents may be given. Paracentesis is required with increasing severity of the lesions and likelihood of perforation. Nonspecific therapy with boiled milk given intramuscularly every other day, typhoid vaccine intravenously, or Omnadin or Proteolac for office use is resorted to in resistant cases. Hot compresses applied several times daily may provide some relief and aid healing.

It is wise to build up the patient's power of resistance by a nourishing diet and adequate rest. Such was the usual treatment before the advent of cortisone.

The results of topical cortisone and hydrocortisone therapy in keratitis and corneal ulcers of various types, now being reported freely in the medical literature, are still not entirely clear-cut although definitely encouraging. A striking effect of such treatment [9] is the prompt relief of corneal or ocular pain within a few hours of beginning treatment, even though the lesion itself may not respond. Because of lack of uniformity of nomenclature, it has not been possible to report results of hormone treatment in neat categories. Using the terms employed by the many investigators, varying proportions of the following types of corneal ulcer and keratitics have definitely responded to topical cortisone or hydrocortisone treatment: marginal, [2,4,7,12,15,16,22,29,31,33] dendritic, [4,5,9,11,12,16,19,] postherpetic [11] recurrent, [2,9,11,19,] superficial [19,33] nonspecific, [2,7,9,15,16,18] disciform, [2,7,15,29,30,31,32,33] vernal [22,29] inflammatory corneal disease.[2,16]

It has, however, been disconcerting to encounter definite lack of response in occasional cases of types of keratitis that, in the great majority of cases, improve with cortisone. Duke-Elder [7] summarizes the situation by saying that in the literature there are uniformly good results in keratitis, even of tuberculous etiology, but relapse tends to occur at the end of treatment and scars are, of course, not affected. Since Duke-Elder's summary, however, it has become evident [29] that the action of cortisone and hydrocortisone in early dendritic ulcers is essentially a masking effect and not actually beneficial. The masking effect has led to severe complications of deep corneal and uveal disease with complete loss of vision. In late and trophic stages the hormones were beneficial. Herpetic lesions respond best to chlortetracycline by all routes.[33] Mooren's ulcer seem resistent to the action of the hormones.[29] It is thus evident that the advent of topical hormonal therapy has introduced its own problems into the treatment of corneal lesions. While it usually successfully blocks inflammatory reactions with reduction of vascularization and scarring, the infectious element must be controlled by chemotherapy.[24]

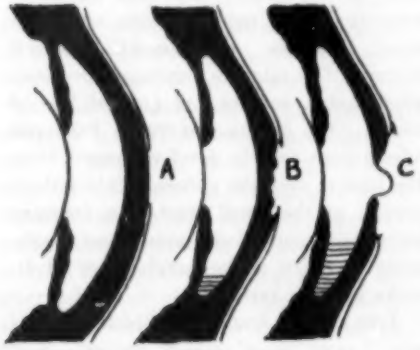


Fig. 3. Corneal Ulcer

A. An abrasion of the cornea
B. Beginning serpent ulcer
C. Just before corneal perforation showing descemetocele and hypopyon in anterior chamber (after Adler)

Superficial punctate keratitis is a condition in which from one to several hundred fine opacities or infiltrations appear in the superficial layers of the cornea, with a concentration in the central area. One or both eyes can be involved. The disease may start as a mild conjunctivitis, with the gray dots developing a few days later. The main symptoms are pain, photophobia, lacrimation, conjunctival injection and diminution in vision proportionate to the corneal involvement. Trachoma, infections of the conjunctiva, lacrimal ducts and lids, as well as viral or respiratory infections may accompany this type of keratitis. The small opacities may coalesce to form larger lesions, may develop into disciform keratitis or dendritic ulcers, or may form a series of erosions imparting a nutmeg-grater ap-

pearance to the corneal surface.

Healing of a few mild lesions often occurs with little effect on the vision. The patient is more comfortable, however, and cure may be accelerated by using saline irrigations, 0.5% atropine ointment and dark glasses. Multiple superficial erosions do not always heal as readily as a smaller number of lesions. In such cases, 1% atropine ointment is more useful and special attention should be given to general tonic measures and the elimination of any condition that is irritating the cornea. Cortisone, administered topically, appears definitely effective in this form of keratitis, for case reports of patients so treated show prompt remission.[2,7,15,22] In a survey of the literature, superficial punctate keratitis is classed as a condition in which investigators are in almost unanimous agreement that local cortisone treatment is encouraging.[4] Braley and Alexander [35] seem less enthusiastic about cortisone, however.

Vascular keratitis, a general term rather than a clinical entity, may include any form of corneal inflammation in which the development of adventitious vessels occurs. Among the multiple conditions associated with or causing vascular keratitis are the following: phlyctenular disease, rosacea, trachoma, ulcers of varying etiology, conjunctivitis or other forms of sustained irritation, chemical injuries and riboflavin deficiency. No causative factor can be detected in some cases. The condition arises as a result of extension of small vessels from the limbus into the cornea. While the purpose of corneal vascularization would appear to be reparative, yet excessive proliferation of such vessels is a menace to the cornea. The symptoms are similar to those of other forms of keratitis.

When vascular keratitis is associated with a known cause, treatment of the basic factor is primary. In addition, known causes of corneal irritation should be removed and resistance built up by general measures. Local therapy formerly was restricted to saline irrigations, atropine ointment and dark glasses; cauterization was at times a necessary adjunct. The keratitis of rosacea has been attributed to riboflavin deficiency and both this type of the disease and that due to ariboflavinosis respond to daily oral doses of from 5 to 15 mg. of riboflavin. In recent reports, vascular keratitis due to the following conditions responded to topical cortisone, the method of choice treatment: rosacea, [7,20,25,29,31,33] ulcers, phlyctenular keratoconjunctivitis, conjunctivitis and chemical injuries. Mention of this fact is made in the appropriate sections on these conditions.

Deep keratitis is a general term used here to describe inflammatory conditions of the corneal layers beneath the outer epithelial layer. Often, of course, superficial keratitis of varying etiology may deepen to involve the substantia propria, i.e., phlyctenular disease, rosacea and most corneal ulcers. The best known form of deep involvement is interstitial keratitis, which, though commonly associated with congenital syphilis, may in rarer instances be due to acquired syphilis, tuberculosis and unknown causes. Other conditions with which keratitis profunda has been associated as a sequel include virus diseases, malaria, trypanosomiasis and trauma. The common symptoms are pain, photophobia, tearing and gradual loss of vision. The cornea acquires a haze and adventitious vessels develop inward from the limbus over the cornea, while inflammation of the uveal tract is a frequent accompaniment. Some permanent inpairment of vision is the usual legacy of attacks of deep keratitis.

Treatment is first of all directed toward any known constitutional causes. Rest and general tonic measures are indicated. Mydriatics and dark glasses are used to put the uveal tract at rest during the acute phase. Antibacterial drops may be added if there is much conjunctival discharge.

Substantial hope for the treatment of deep keratitis has come with the advent of cortisone. Since authorities use different terms for the same conditions, the following types of deep keratitis, as named by the authors, have responded to the topical administration of cortisone or Hydrocortone: syphilitic interstitial, [2,4,7,15,19,20,21] nonspecific, [4,21] nonluetic, [13] deep, [2,4,7,12,13] interstitial, [9,11,16]. Despite the fact that some relapses do occur in all forms of the disease and action of the hormones be available [26], Duke-Elder [7] states that "if treated early, luetic interstitial keratitis is a definite indication for cortisone."

Conditions Involving Structures Posterior to the Cornea Like diseases of the cornea, disorders of the lens, uveal tract, anterior and posterior chambers, retina, optic nerve and ocular muscles are better referred to an ophthalmologist. Conditions of structures deeper than the cornea are reviewed here briefly with reference to tentative diagnosis and emergency treatment only. Continuing studies [9] on the systemic use of cortisone and corticotropin in the deep inflammatory ocular conditions indicate there is a more hopeful prognosis for many of these diseases when treated by an ophthalmologist.

Cataract may be defined as any opacity of the crystalline lens, although a variety of terms is used to define the disease according to age of appearance, location, rate of development and progression, and morphology. While development cataract may be present at birth or appear soon afterward because of hereditary, nutritional or inflammatory influences, the commoner degenerative or senile form of cataract may be due to aging, trauma and other effects of physical agents, systemic diseases, uveal inflammation and so on. The main symptom is gradual loss of vision, the degree thereof depending upon the location and extent of the opacity. Pain occurs only when intra-ocular inflammatory conditions are primary and cataract secondary. The diagnosis is usually readily made since the eye can detect the gray opacities of well advanced cataract in the lens. Ophthalmoscopic examination of the dilated pupil is required to find the less distinct bodies which cause dark defects in or complete obliteration of the red reflex. However, since gradual loss of vision in older patients is characteristic of both cataract and glaucoma, increased ocular tension should be ruled out before dilatation of the eye for ophthalmoscopy. Aside from frequent refraction and changing of glasses to maintain useful vision, operative removal is the only treatment for cataract. In over 50 cases of opacities of the lens in patients treated with cortisone for other conditions such as uveitis, no changes were observed in the lens opacities.[9]

Uveal Tract Iritis and iridocyclitis, acute or chronic inflammation of the iris or iris and ciliary body, may arise from a wide variety of systemic diseases and infectious foci, as well as being idiopathic. Iritis is a frequent complication of keratitis, corneal ulcer and trauma and may more rarely occur in conjunctivitis. Severe radiating pain in the eyeball, worse at night, is the commonest symptom, while lacrimation, photophobia, blurring of vision and disorders of muscular balance may also be present. When the ciliary body is also involved, symptoms are more severe.

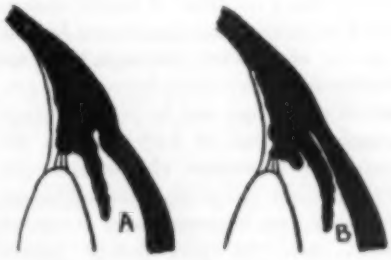


Fig. 4. Glaucoma

A. Angle of anterior chamber in normal eye
B. Angle of anterior chamber in recent congestive glaucoma (after Mays)

For differential points of value, the reader is referred again to the table showing the differential diagnosis of acute conjunctivitis, acute iritis and acute glaucoma, which is included in the section on conjunctivitis. Because of the severity of the complications and sequelae of uveal tract inflammation, prompt expert therapy is required. Until this is available, the following measures may be instituted: 1% atropine q. 2 h. until the iris is dilated, then 3 or 4 times daily to maintain pupillary dilatation or, if need be, 10% phenylephrine hydrochloride[36] to produce dilatation; hot compresses for 15 min, q. 3 h.; cortisone drops q. 1 h. while awake (best in acute types); bed rest; systemic analgesics (codeine and acetylsalicylic acid); and 0.5% tetracaine hydrochlorine solution topically for anesthesia; systemic antibacterial therapy may be necessary and also intravenous typhoid vaccine or intramuscular use of boiled milk.[39] A report of Gordon and his coworkers[9] points out the possibilities of systemic hormone therapy in deeper uveal tract conditions. Leopold[4] considers that a preponderance of favorable results is obtained by topical cortisone alone or combined with systemic use of cortisone or the corticotropic hormone in acute forms of uveitis but response is less consistently good in the more chronic disease. Of late, some cases of acute iritis responded more rapidly to hydrocortisone than to cortisone.[33,38,37]

Glaucoma, a condition of the eye characterized by increased ocular tension leading to partial or complete loss of sight, is apparently due to imbalance between the production of aqueous and its normal escape through the canal of Schlemm. In different types of primary glaucoma, hereditary, anatomic deviations, arteriosclerosis, advancing age, hyperopia and vasomotor lability may be predisposing causes. Secondary glaucoma may result from inflammatory ocular diseases, trauma, operative procedures, tumor, hemorrhage and thrombosis of the central retinal artery. It should be recalled that belladonna derivatives and their synthetic substitutes now widely used as antispasmodics in gastro-intestinal conditions can cause exacerbations of glaucoma.[38A]

From the viewpoint of urgency, *acute congestive* glaucoma is most important. Reference to the table included in the section on conjunctivitis will show the main points differentiating an attack of acute glaucoma from acute iritis and conjunctivitis. While prodromal symptoms (transitory diminished vision, colored halos around lights, pain in eye and head) may appear sporadically for months or years before a full-blown attack, the latter is identified by rapid loss of vision and sudden severe pain in the eye radiating over the course of the fifth nerve. The pupil is dilated and fixed, the cornea steamy ("looks like a piece of glass that has been breathed upon")[14] the eyeball tension markedly increased, and the aqueous turbid, thus interfering with ophthalmoscopic examination of the fundus. The pupil is always moderately dilated and irregular and does not react to light. The eyeball feels stone hard. The accompanying nausea and vomiting may be so severe that the causative ocular condition is overlooked.

Once the diagnosis of a full-blown attack is made, immediate treatment must be started. Morphine is given to lessen pain and help contract the pupil. One per cent physostigmine salicylate solution alone (or alternated with pilocarpine nitrate) is instilled every 15 min. for two hours and then every half hour until miosis occurs and tension decreases. Acetyl-beta-methylcholine chloride 20%[36] and 5% neostigmine may be used instead of pilocarpine and physostigmine. Cold or ice compresses may be used for 15 min. every half hour. Fluids are limited and 100 cc. of 50% glucose may be given intravenously to help reduce ocular tension. As a precaution, the opposite eye should receive 0.25% physostigmine salicylate solution or 1%

pilocarpine nitrate solution often enough to keep it in a miotic state. Once the tension has been reduced, it may be controlled by use of 1 or 2% pilocarpine q.i.d. and perhaps ¼% physostigmine (eserine) alkaloid ointment at night. If tension is not relieved within 6 to 8 hours,[39] or perhaps 24 hours under careful supervision, iridectomy is required to avoid permanent loss of sight.

Chronic congestive glaucoma has similar, but milder, signs and symptoms than the acute disease and the onset is more gradual. Treatment is similar but less vigorous than in the acute form, the objective being the maintenance of miosis. Preferred for long-term miosis is a 2 or 3 per cent solution of pilocarpine nitrate in 0.5 or 1.0 per cent methylcellulose solution.[40] Surgery becomes a necessity after several weeks if the disease is not under control. *Chronic simple glaucoma*, a far commoner condition than the acute congestive form, is insidious in onset, with progressive loss of sight, premature nearsightedness, contraction of the visual fields and scotomata developing, sometimes, unnoticed by the patient. Colored halos about lights, foggy vision and impaired dark adaptation may be mentioned as symptoms. Increased tension of the eyeball may be found only with use of the tonometer. Earliest signs are contraction of the nasal sides of the visual fields as a right angled defect and a large scotoma in the area of the blind spot. In most cases the tension can be retained at normal with one of several miotics, the response differing from patient to patient: 1 or 2% pilocarpine nitrate, 0.1% diisopropyl fluorphosphate in peanut oil,[41] 1% physostigmine salicylate, 1.5% carbamycholine (or carbachol) chloride,[42] or 5% neostigmine bromide.[43] These are instilled as required to maintain miosis. The visual fields and intra-ocular tension should be tested at frequent intervals. When the tension cannot be reduced to nor-

Ophthalmic Medications

Collyria and Irrigations

Sodium chloride sol.	¼%
Sodium bicarbonate	1%
Boric acid	3%

For home preparation[42]:

Table salt, baking soda, boric acid, 1 teaspoonful each; glycerin, 1 tablespoonful; dissolve in 1 qt. boiled water and use in eyecup, as required.

Diagnostic Stain*

Fluorescein	0.6 Gm.
Sodium bicarb.	0.75 Gm.
Aq. Thimerosal[44] 1:3000	30 cc.

1 drop in eye, flushed out in 1 min. with saline. (This is said to be stable and bacteriostatic longer than usual preparation. Benzalkonium[45] incompatible with fluorescein)

Anesthetics*

	% solution	% oint.
Tetracaine[46]	0.5	0.5
Butacaine[47]	1-2	2
Cocaine	4	
Phenacaine[48]	1	2
Piperocaine[47]	2	4
Dibucaine[46]	0.25	0.5

*Based on Paton[49] and Hunt[50]. Most of these are available with antiseptics, vasoconstrictors, antihistaminics, etc. New ophthalmic anesthetics are Ophthaine® (0.5%) Squibb[49] and Dorsacaine® (0.4%) Smith-Dorsey[50].

Hormonal Agents

	% susp.	% oint.
Cortisone acetate [51]	0.5, 2.5	1.5
Hydrocortisone acetate[52]	0.5, 2.5	

1 or 2 drops in eye q. 1 h. during day and q. 2 h. at night. With improvement, reduce to 1 drop q. 4 h., then q.i.d. or t.i.d. for maintenance. Ointment for use at night or with patch. Combinations of the hormones are available with antibacterials[54].

mal or the visual fields continue to decrease, operative treatment is needed.

According to Hunt,[38] "a glaucoma patient is a patient the rest of his life."

As noted above, *secondary glaucoma* may be caused by a variety of ocular diseases which interfere with the normal flow of aqueous from the eye. Correction of the primary disease by medical or surgical measures is necessary for relief of the glaucoma. Miotics are usually not indicated.

Treatment of primary glaucoma with cortisone has not given encouraging results,[4] but the hormone, applied topically, has apparently benefited or prevented secondary glaucoma complicating inflammatory diseases of the anterior part of the eye,[3,9,31] although its action is unpredictable.[36]

Retina and Choroid. Inflammation of the choroid (choroiditis) or of the choroid and retina together (chorioretinitis) may be due to several systemic diseases, focal infections or unknown causes. While the patient complains of lessening of the vision, distortions in size and shape of objects, visual field defects, ocular discomfort and perhaps photophobia, external signs are usually lacking. Ophthalmoscopic examination shows patches of exudate in the fundus, the site depending upon the area of inflammation. Hemorrhage and opacities may be present in the vitreous. Immediate treatment consists of 1% atropine locally and specific therapy is directed toward any causative condition. The ophthalmologist may resort to hormonal therapy,[4,9] among other measures.

Retinal Detachment, either partial or complete, is an uncommon condition occurring idiopathically or in connection with

Antibacterial Agents*

	Solution (unitage / cc.)	Ointment (unitage / Gm.)
Penicillin (crystalline)	1,000 - 10,000 u.	1,000 - 50,000 u.
Dihydrostreptomycin	5,000 mcgm.	5,000 - 10,000 mcgm.
Chlortetracycline[55]	5 mg.	5, 10 mg.
Chloramphenicol[57]	1 - 5 mg	10 mg.
Oxytetracycline[55]	5 mg.	10 mg.
Bacitracin[58]	1,000 u.	500 - 1,000 u.
Neomycin[60]	2.5 mg.	2.5 - 5.0 mg.
Polymyxin[61]	2.5 - 5 mg.	2.5 - 5 mg.
Sulfacetamide sodium[62]	0.3 Gm.	0.1 Gm.
Sulfadiazine		0.05 Gm.
Sulfadiazine sodium	0.1 Gm.	
Sulfamylon®[63]	0.05 Gm.	
Sulfisoxazole diethanolamine[64]	40 mg.	

* Based on Hunt,[38] Leopold [4] and Bellows [39]

MIOTICS (pupillary constrictors)	% solution
Physostigmine (eserine) salicylate	0.25, 0.50, 1.0
Pilocarpine nitrate	0.5, 1, 2
Neostigmine[66]	0.5
Di-isopropyl fluorophosphate (in oil)[41]	0.1
Carbamylcholine HCl[67]	1.5
Acetyl-β-methyl-choline chloride[68]	

MYDRIATICS (pupillary dilators)	% solution
Atropine sulfate	1, 2, 4
Ephedrine	3 - 10
Homatropine HBr	2 - 5
Phenylephrine HCl[69]	2, 5, 10
Cyclopentolate[65]	0.5, 1.0

uveitis, subretinal edema, choroidal hemorrhage, use of potent miotics, and trauma. The chief symptom is either partial or complete loss of vision. Ophthalmoscopic examination in flat retinal detachment shows a somewhat cloudy retina, while the vessels are darker and more tortuous with some diminution in the light reflex. The more usual steep detachment, generally starting near the periphery, is distinguished by grayish, bluish-gray or greenish folds with white tops presenting a bright sheen. Blood vessels are very tortuous, prominent and dark red to blackish and smaller than normal. Often one or more holes or rents can be found in the detached portion. The patient should be put to bed at once and both eyes bandaged or pinhole glasses used until expert opinion is obtained. Prompt operative reattachment offers the only hope.

Arteriosclerotic, hypertensive and diabetic *retinopathy*, as indicated by the qualifying terms, occurs as a complication and general treatment is essentially that of the basic condition. Ophthalmoscopic study reveals characteristic changes in the retinal vessels but an expert is required to differentiate between them. Little is known of the action of the new hormones on the retainal vessels.[9]

The inflammatory conditions of the optic nerve—*optic neuritis* and *retrobulbar neuritis*—are usually found accompanying syphilis and other diseases of the central nervous system, foci of infection and poisoning by methyl alcohol, carbon tetrachloride and certain heavy metals. In optic neuritis the only symptom is decrease in vision ranging from minimal to complete loss. In retrobulbar neuritis there is usually rapid loss of central vision, sometimes with pain in the orbit made worse by movements of the globe, and central scotoma. In the very early stage, it may be impossible to diagnose optic neuritis with the ophthalmoscope, although comparison of the two eyes may show slight differences. Later the disk is swollen, enlarged, or whitish or gray in color with a red center, and striated, and white spots and hemorrhage may occur. Arteries are thin, veins distended and very tortuous. In retrobulbar neuritis, however, there are no signs at first and later only slight hyperemia of the disk, haziness of its margins, with slight distention and perhaps diminished caliber of the retinal vessels. The most important aspect of treatment is care of the underlying condition, with perhaps hyperthermic therapy and large doses of thiamine. Further trial with systemic use of cortisone or corticotropic hormone may prove helpful;[4] definitely encourging results were obtained in at least one series,[9] although Harris[26] considers the hormones variable in effects on this condition.

Antiseptics*

(Except sulfonamides and antibiotics)

	Solution	Ointment
Benzalkonium chloride[24]	1:3000-5000	
Benzethonium chloride[25]	1:5000	
Nitromersol[20]	1:3000	1:3000
Thimerosal[21]	1:3000	1:5000
Zinc sulfate	0.1 - 0.25%	0.5%
Bichloride of mercury		1:5000
Yellow oxide of mercury		0.5, 1-2%
Sodium propionate[23]	5%	

*Some of these agents are also available combined with anesthetics, vasoconstrictors, etc.

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53. Hydrocortone Ophthalmic, Merck & Co.; Cortril Ophthalmic Ointment, Pfizer Laboratories.
54. Neosone Ophthalmic Ointment (cortisone and neomycin), The Upjohn Company; Cortone with Bacitracin Ophthalmic, Merck & Co., Cortomyd (cortisone and sodium sulfacetimide), Schering Corporation.
55. Metaphen, Abbott Laboratories.
56. Aureomycin, Lederle Laboratories.
57. Chloromycetin, Parke, Davis & Co.
58. Terramycin, Chas. Pfizer & Co.
59. Baciguent Ophthalmic, The Upjohn Company; Bacitracin Ointment, various manufacturers.
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Weight Reduction

By Combined Medication and Group Therapy

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It is now well recognized that the basic tenet of all successful weight reduction programs is the restriction of food intake. Many studies[1,2,3] have shown that obesity of the common exogenous type is not due to decreased expenditure of energy in the basal state, but rather to eating more than is necessary to meet growth, maintenance and energy requirements. The major problem, then, lies in curbing the appetite of the obese person, for many are unable to overcome their habit of eating excessively, and therefore good dietary advice alone proves insufficient. In recent years, both the development of various anorexigenic agents and the recognition that the habit of overeating in most instances is a response to an unsatisfactory life situation or to some personality disturbance have offered the physician dual means of controlling eating habits. This study has been undertaken to determine the value of utilizing the anorexigenic drugs and group therapy simultaneously in a weight reduction program.

Anorexigenic Agents Lesses and Myerson[4] first demonstrated that amphetamine would cause a reduction in weight. They observed, while using the drug for other purposes, a frequent decrease in appetite and in fatigue, and a beneficial feeling of well-being. This resulted in a voluntary restriction in food intake and led to a subsequent weight loss in their patients. Because this work appeared promising, many investigators have given amphetamine for weight reduction. The many factors involved have made the results somewhat variable. For example, Kunstadter[5] observed a weight loss of .83 pounds/week after a 2-week treatment period in children in whom previous dietary control had failed. Bruch and Waters[6] found at the end of a year's study that benzedrine sulfate appeared beneficial but that perhaps their dosage level (10 mg./day) was inadequate to give definitive results. Albrecht[7] noted an average weekly weight loss of 4.24 pounds for males and 3.9 pounds for females in a series of 300 cases taking 10-30 mg./day of benzedrine sulfate. Osserman and Dalger[8] reported that 36 out of their 55 obese diabetic patients who previously had been unable to adhere to their diet, lost more than 10 pounds when put on a regimen first of benzedrine sulfate, then Dexedrine.[8]

The physiological mechanism for these observed weight losses was explained in a series of controlled experiments by Harris et al.[9] They showed that loss in weight is definitely associated with a reduction in appetite probably caused by a nonspecific rather than direct action of

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amphetamine on an appetite mechanism in the cerebrum or on a hunger mechanism at the hypothalamic level or on both. They also found an increased willingness to remain on the diet, a factor noted earlier by Lesses and Myerson.[4]

Group Therapy Harrington[10] first demonstrated that many obese individuals have emotional, unstable personalities and that they obtain relief during periods of nervous stress by repeated eating. In some of these persons,[11] this state of stress may be more or less continuous. In others, there may be a history of either emotional or economic deprivation, and food may serve as a means of satisfying the need for affection or material security. It may be the only pleasure for people of limited interests, or it may serve as an escape from competition.

Whatever the cause, a psychotherapeutic approach to the problem has been proven important. However, since individual psychotherapy is both impractical and unnecessary in most instances, group therapy has been tried. The largest project of this nature is that reported by the United States Public Health Service undertaken in Boston in conjunction with the Massachusetts Health Department. In that study,[12] the groups were organized to give support to persons while they were following their physician's advice. They were given an opportunity to decide how much weight they wished to lose, and at what rate, as well as to share common difficulties and accomplishments. Out of 102 patients, 47 lost 10% or more of their weight, 15 gained 10% or more and 40 showed no change. The patients' enthusiasm for this type of therapy led to the subsequent formation of many smaller groups, which the participants considered very helpful. Another large study of this nature is in progress in the Department of Research at the Herrick Memorial Hospital in Berkeley, California.[13]

Treatment Plan In this study, 103 patients, male and female, were divided into 3 groups. Group I consisted of 53 individuals ranging in age from 17 to 62 years, and in weight, from 134 to 270 pounds. This group was given 3 Obedrin* tablets daily at 8, 11, and 3 o'clock. In certain cases where the person was young and weighing over 200 pounds, as much as twice the dose was given. Along with these tablets, each subject was placed on a 1,000 to 1,200 calorie diet of a high protein, low fat nature. The exact height, weight and medical history were recorded. Blood pressure, the heart, lungs, and hemoglobin levels were checked to be certain that the subject was in normal health. Group II was the control group. It consisted of 45 individuals from 18 to 66 years of age, weighing from 134 to 246 pounds. These subjects were treated exactly as were those of Group I, except that they were given a placebo tablet rather than Obedrin. Group III consisted of 6 individuals that served as their own controls. Their age range was 29 to 53 years and weight range was from 135 to 214 pounds. These persons were placed on the same restricted diet and given the placebo tablet for from 4 to 6 weeks. Since no weight change occurred, they were taken off the placebo without their knowledge and put on Obedrin for the remaining 4 to 5 weeks of the experimental period.

The experimental period lasted for an average of 8 weeks. Throughout the entire program, each patient was treated individually and exclusively as a private patient; in fact, no one was aware that they were part of a research program. Patients were seen at two-week intervals. Changes in weight and the general mental attitude were observed. To maintain enthusiasm for their dietary regimen, 25 persons at a time were invited to the author's office for an evening class session at the end of the third week of the experiment. These sessions consisted of a short lecture and discussion on a topic pertinent

* Obedrin, S. E. Massengill Co.

to the program. Low caloric refreshments were served in an appetizing manner. In this way, the patients had an opportunity to realize that they were not alone in their problem, but that others, too, were faced with a similar situation. Each patient served as his own standard. At no time was the progress of one compared with that of another. It was clearly established that no two individuals could progress in exactly the same manner. All these factors seemed to stimulate confidence and determination to adhere to the tablet and diet routine.

Results The subjects in Group I (Obedrin) showed steady and appreciable decreases in weight. The average weight loss was 15 pounds over an 8-week period or 1.9 pounds per week. The losses ranged from 3 to 68 pounds (Figure 1). The rate of loss was largely proportional to the degree of self-denial. On the whole, it was sufficiently slow so that no objectionable wrinkling or sagging developed. Vitamin supplements were given in only 5 cases of extreme loss. In Group II (placebo), the results were not as gratifying. The average loss was just 0.6 pounds over the entire experimental period, and ranged from a maximum of 8 pounds to an actual gain of 4 pounds (Figure 1).

In terms of percentage weight loss, the average loss in Group I (Obedrin) proved to be 8.1%. The losses ranged from 1.9% to 27.6%. One individual lost over 20%; 8 lost 10 to 20%; 37 lost 5 to 10%; and 7 lost under 5%. In Group II (placebo), the maximum losses were under 5% of the original weight. Seventeen (17) cases fell into this category; 22 showed no change and 6 gained under 5%. The distribution of these percentage losses is summarized in Figure 2.

The weight losses were further analyzed in terms of the original weights by dividing the subjects into 4 arbitrary weight groups; 1) those weighing over 200 pounds, 2) those between 175 and 200

FIGURE 1, WEIGHT LOSSES

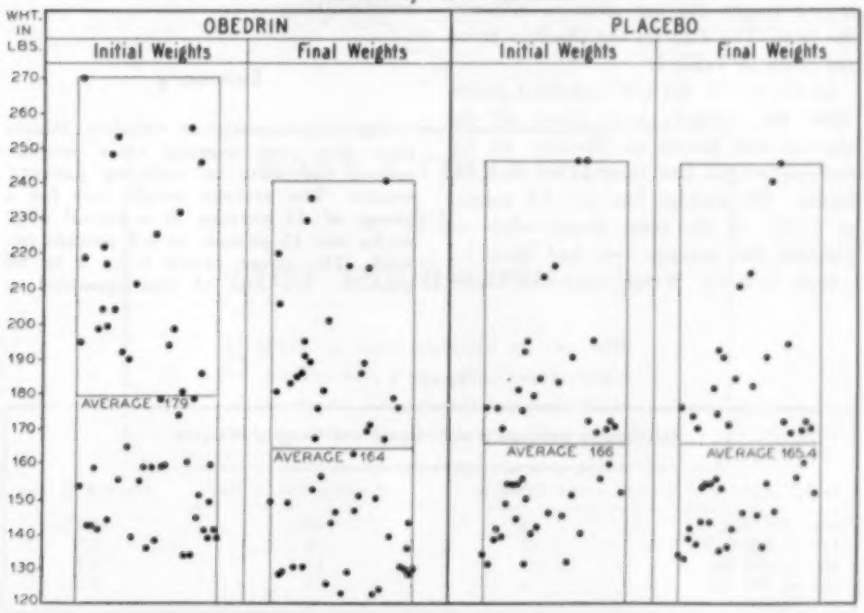


FIGURE 2
COMPARATIVE WEIGHT LOSS - DISTRIBUTION

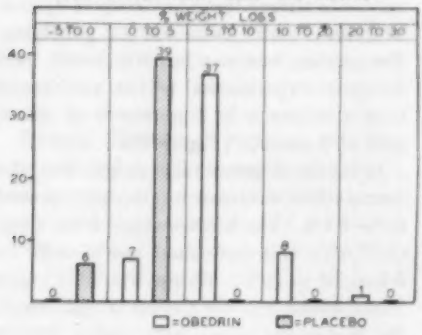
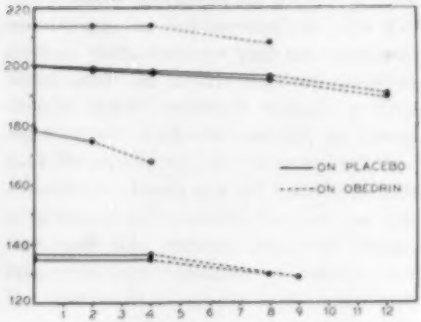


FIGURE 3
SELF-CONTROLLED INDIVIDUAL WEIGHT LOSSES ON PLACEBO AND ON OBEDRIN



pounds, 3) those between 150 and 175 pounds, and 4) those between 125 and 150 pounds. In the Obedrin group, the greatest losses were found in the individuals with the highest initial weights, as might be expected. The next highest percentage loss, however, came in the lowest weight group, although the degree of adherence to the diet was comparable in all the weight groups. In the placebo group, the losses were all very small and the initial weight did not seem to influence the final. The data for the Obedrin group are given in Table 1.

In Group III, the self-controlled group, when the subjects were taken off the placebo and placed on Obedrin, an immediate weight loss resulted in each instance. The average loss was 5.5 pounds or 3.7%. In the same group, while on placebo, the average loss had been 1.2 pounds or 0.6%. Weight curves in Figure 3 show the individual changes while on placebo and on Obedrin.

The absence of side effects throughout the experiment on Obedrin was noteworthy. Out of this group of 59 patients, there were only 2 cases of slight nervousness or depression. These symptoms were eliminated quickly by inviting the two individuals to the evening group which they enjoyed, and which showed them the excellent work that the program was accomplishing.

Summary

The combination of Obedrin tablets plus diet plus evening class sessions proved successful in reducing patients' weight. The average weight loss for a group of 53 persons in a period of 8 weeks was 15 pounds or 1.9 pounds per week. The range varied from 3 to 68 pounds. The rate of loss appeared to

TABLE I

Relationship between Weight Losses and Original Weights

Initial wgt.	No. of individuals on Obedrin	Average loss in lbs.	Average % loss
over 200 lbs.	13	24	10.1%
175 to 200 lbs.	12	12	6.6
150 to 175 lbs.	12	11	6.9
125 to 150 lbs.	16	12	8.6

depend upon the degree of the patient's self-denial.

The combination of placebo plus diet plus evening class sessions was not as successful. The average weight loss for a group of 45 persons in the 8-week period was only 0.6 pounds, ranging from a maximum loss of 8 pounds to a gain of 4 pounds. In this group, almost 50% of the patients (22 persons) showed no change in weight.

In the group of 6 that served as their own controls, first being on the placebo plus diet regimen, then changing to the Obedrin plus diet regimen, the average weight loss increased from 1.2 pounds in the first part of the experiment to 5.5 pounds in the last half.

On the basis of these findings, medication appears to be an integral part of a weight reduction program. The psychotherapeutic approach alone is inadequate in a large percentage of cases, although it is a most helpful adjunct to medication. Medication seems to be the important aid in initiating the control that can ultimately lead to the development of good eating habits that are so essential in maintaining a person's normal weight and good nutritional status.

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Pulmonary Tuberculosis in the Mentally Ill

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This article is in the form of a report of the past six years activities in the Division of Tuberculosis at the Philadelphia State Hospital.

In this institution for the mentally ill, as in similar institutions, tuberculosis among the inmates presents a major problem. To quote Dr. Noyes, of the Norristown State Hospital, "the prevalence of the high rates in these institutions (hospitals for the mentally ill) is well known. In 1946 there were 636,000 patients in mental institutions, and 4247 of them died of tuberculosis. This is a rate of 668 per 100,000. Deaths from tuberculosis in mental institutions composed 8.3 per cent of the total deaths from tuberculosis that year."

Prior to 1945, no systematic effort was made to treat tuberculosis among the inmates in this hospital. One of the staff physicians occasionally administered artificial pneumothorax. In the main, segregation of the diagnosed cases of pulmonary tuberculosis was the sole means of coping with the problem. The culling of the tuberculous from the general wards depended upon the keenness of observation and painstaking care of the staff physicians.

The following criteria were used in the selection of patients for study and observation:—

1. Loss of weight.
2. Cough.
3. Fever.
4. Hemoptysis.
5. Expectoration.
6. Other signs and symptoms and complaints referable to the chest.

Once a month all patients are weighed by the nurse in charge of the ward. A record is made. A weight graph is maintained. These weight graphs are studied by the ward physicians and used as a basis for the selection of patients for further study.

Weight Loss as an indication of the presence or development of pulmonary tuberculosis, proved a reliable criterion in a good many of the cases, although the hyperactive patients—especially those requiring restraints—the catatonic, the melancholic, or the delusional lost weight for longer or shorter periods without it being accompanied by the development or presence of pulmonary tuberculosis.

Cough more frequently led to the investigation and the finding of incipient, moderately-advanced, and even far-advanced cases of pulmonary tuberculosis.

Fever with or without respiratory involvement, led most frequently to the discovery of acute exudative, pneumonic, miliary, or acute exacerbation of old lesions.

Hemoptysis ranks next to fever as a revealing symptom. Though it is occasion-

Permission is granted for the publication of this article by Dr. Eugene L. Sielke, Superintendant, Philadelphia State Hospital, who assumes no responsibility for the opinions expressed or conclusions drawn by the author.

ally complained of by the patients themselves, as a rule it is brought to the attention of the physician by nurses and attendants.

Expectoration, whether slight or excessive, is rarely complained of by the patient, or noted by nurses or attendants. It is therefore down the bottom of the list of symptoms pointing to pulmonary tuberculosis in the mentally ill. The swallowing of expectoration by the psychotic is a common practice. This is especially true of the "retarded" cases.

Other signs and symptoms referable to the chest are glandular swelling, tumefaction and bulging of the thoracic cage, dyspnea and cyanosis. Pain, especially pleuritic, is occasionally mentioned by the "mild psychotic". However, the finding of the presence of a well established, spontaneous pneumothorax or pleural effusion is not an unusual occurrence.

The physical examination of the mentally ill is beset with many difficulties. Its reliance as a means of detection of the presence or absence of pulmonary tuberculosis depends upon the degree of cooperation or the ability to cooperate on the part of the patient. In the suspected case, reliance must be placed on x-ray findings, not only for the establishment of the diagnosis, but also to determine the degree of activity. In pursuance of the program to eliminate the active cases of tuberculosis from the general wards, a course of action was initiated in 1945. In the period between November 1, 1945 and March 25, 1946 a total of 228 males and 233 females were x-rayed. A 14 x 17 chest film was used. It was found that the process of bringing the patients to the x-ray department, arranging and posturing of the patients was time consuming. Progress was slow. Added to this, the time consumed in processing and developing made such a survey for this hospital, with its 6400 patients, impractical and prohibitive in cost. The report of this initial survey showed the following:

The development, presence and extent of pulmonary tuberculosis in the mentally ill is a phase of the problem in the care of the mentally ill that is unknown to the general public. What the public was made cognizant of was the deterioration of the physical plant and facilities during the war years. The lay press called attention to the over-crowding in the wards and infirmaries, the lack of recreational facilities, the shortage of nurses and attendants, and the depleted medical personnel. The campaign by the newspapers and periodicals, the arousing of the public interest, and an enlightened and sympathetic state government brought forth a program in 1947 that materially changed conditions for the better at the Philadelphia State Hospital. Since 1947 five patient buildings have been constructed and eight renovated; most of the program being carried out between the years 1947 and 1951. The double-decker dormitories are now a thing of the past. The grouping of patients in separate buildings, according to their type of psychosis, is now a possibility.

The full extent and enormity of the problem of tuberculosis in the mentally ill could only be surmised by the sporadic spot-surveys. A more adequate and reliable check could be brought about by a fluorophotographic survey of the whole hospital population. In 1948, and again in 1951, this was carried out with a completeness and thoroughness that made for accuracy and reliability.

The ability of the psychotic patient to perform routine duties, in spite of the presence of moderately or far-advanced tuberculosis, was poignantly demonstrated in these surveys. It revealed active tuberculosis in patients employed in various work details. Two cases are cited for illustration. Both cases showed little external physical evidence of the extent and gravity of the tuberculous lesion in their lungs.

Case 1 (Andrew W.) This patient, a

schizophrenic, paranoid type, was admitted to this hospital December 13, 1934. Though constantly hallucinated, and reacting to his hallucinations, which were mostly auditory, he was able to work on many hospital details. Examined routinely in the 1948 survey, the x-ray revealed an irregular mottled density throughout both upper lobes. On the right side there was a well-defined cavity at the level of the clavicle. The findings were indicative of bilateral upper lobe tuberculosis with a cavity about 2½ cm. in diameter in the right upper lobe. The sputum was found to be positive for acid-fast bacilli. This patient submitted readily to treatment by means of artificial pneumothorax.

Fig. 1 shows the extent and severity of the tuberculous process.

Fig. 2 shows the apparent closure of the cavity in the right upper lobe and the stabilization of the tuberculous lesion in both upper lobes.

Case 2 (Joseph A.) Diagnosis schizophrenia, paranoid type. He was a tall, muscular man, forty-four years of age. X-ray revealed extensive mottled density in the right upper lobe with large cavities below the clavicle typical of fibro-ulcerative type of tuberculosis. There was evidence of a bronchogenic spread to the mid-lung field on the right. There was steady progression of the tuberculous process, and he died June 1, 1952. Figure 3 shows the extent of the lesion when first seen in the survey.

The photo-fluorographic surveys conducted in this hospital revealed the extent and number of patients affected with pulmonary tuberculosis. It gave us the opportunity to properly classify them. A program was initiated:

1. To remove all active cases from the general wards.
2. To treat the "minimal" cases left in the wards.
3. To segregate the moderately and far-advanced cases.

A report rendered on April 1, 1946, is as follows:

Bldg.:	Total Cases:	T.B. Cases:	Questionable T.B.:	Negative:	Percentage:
A — Crowded, untidy, regressive mental disease — Males:					
	22	4	0	18	18%
B — Acutely disturbed males:					
	17	1	0	16	6%
C — Markedly overcrowded; epileptic and chronic deteriorated male cases:					
	106	8	0	98	7%
E — Minimal supervision locked ward male cases:					
	15	1	0	14	7%
W — Open Ward, all ground parole male cases:					
	68	1	0	67	1½%
8 — Acutely disturbed female patients:					
	52	3	1	48	8%
9 — Untidy, mentally deteriorated female cases:					
	9	1	0	8	10%
10 — Better condition of patients from mental and physical standpoint — Females:					
	110	0	1	109	0.9%
11 — Aged and infirm females:					
	30	1	0	29	3%
Cottage 7 — Typhoid carriers: all types of mental disease — females:					
	32	0	0	32	0
TOTALS	461	20	2	439	4.8%
Totals Male	228	15	0	213	4.6%
Totals Female	233	5	2	226	3.0%

4. To keep a check on the minimal cases by re-examination every three months, and their transfer to the Division of Tuberculosis when progression of the disease was noted.

One of the greatest measures of benefit derived from these surveys was the elimination of the "open case" still physically able to be assigned to the various work details.

The statistics of the fluorophotographic survey of 1948 are as follows:

Total hospital patient population 6400.

Total number of 70 mm. films taken 5445.

Total number of patients not included in survey 965. (230 patients in the Division of Tuberculosis (Bldgs. E-8 and 2-W); 735 patients too ill, bed-ridden or extremely uncooperative.)

Total number of negative 70 mm. films 4999. (This number includes 73 cases labeled cardiovascular disease; 72 cases non-tuberculous chest conditions.

Total number of cases listed in the survey as active and inactive 446.

Recheck by 14 x 17 films revealed negative findings in 207.

Total number of cases of pulmonary tuberculosis detected in this survey, both active and inactive 239.

Total number of cases of pulmonary tuberculosis in this institution, both active and inactive 469, or 7.3% of the total hospital population.

In 1948 the survey was conducted with equipment loaned to this institution by the Westinghouse Electric Company. This equipment was stationary, and the patients were brought to a central point during the course of the survey.

In 1951 the survey was conducted with equipment bought by the State and handled by the Staff of the Philadelphia State Hospital. Whenever practical, the equipment was brought to the various wards and buildings. The statistics for the fluorophotographic survey of 1951 are not as yet available.

The diagnosis of pulmonary tuberculosis in the mentally ill immediately places in abeyance all measures that were planned or were being carried out for the amelioration or cure of the mental condition. Admission to the Division of Tuberculosis in the past put these patients in the category of "forgotten men", there to remain until spontaneous recovery occurred or death ensued. The attitude of some friends or relatives to the development of pulmonary tuberculosis in the mental case is worthy of comment. The attitude is that this complication is "a way out", and nothing should be done to control the tuberculosis. To obtain permission for surgical measures is often beset with difficulties, and in many instances authorization is flatly refused by relatives and friends. To quote Dr. Eugene L. Sielke, Superintendent of the Philadelphia State Hospital, "the vagaries in mental disease are so many, and spontaneous remissions are so frequently seen, that to let the tuberculous remain untreated is unfair to the patient, and not in consonance with good medical practice. Considering the advances made in recent years in phthisis therapy, a certain number of the tuberculous mentally ill can be salvaged."

Selection of patients for treatment on the basis of x-ray findings alone is often nullified by finding:

1. Severe mental and physical dilapidation.

2. Epilepsy.

3. Syphilis, cardiovascular or cerebrospinal.

4. Age limit.

Even in the properly selected cases, based on physical findings corroborated by x-ray examination, the treatment of pulmonary tuberculosis by means of artificial pneumothorax depends upon the mood, accessibility and attitude of the patient. Some weeks the patient under treatment for pulmonary tuberculosis is tractable and docile and cooperative; at

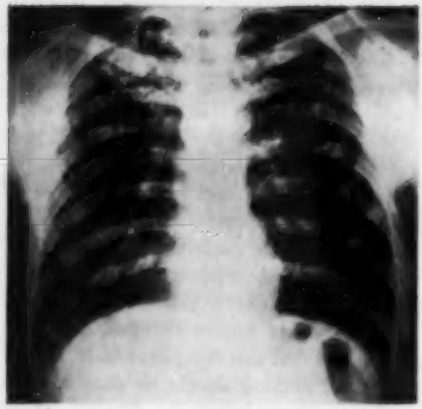

Fig. 1

The x-ray film taken 1-27-45 revealed bilateral upper lobe tuberculosis, more extensive and more confluent on the right. Beneath the right clavicle can be seen a cavity 2½ cm. in diameter. The sputum was positive for acid-fast bacilli. In spite of the extent and severity of the lesion, this patient was ambulatory and able to work on various work details.

other times treatment is hazardous or even impossible.

Since 1945

Number of cases treated by pneumothorax 37.

Number of cases completed and the lung allowed to re-expand 20.

Number of cases treated by means of pneumothorax and treatment abandoned before completion 17. Of these 17 cases treatment was abandoned in 7 due to extension of the disease to the contralateral lung. In 10 cases treatment was terminated because of the patient's mental deterioration and the resulting inability of the attending physician to render treatment.

Pneumoperitoneum was administered in 4 cases. In 3 cases treatment was given for three months time. One case is still under treatment.

Pneumoperitoneum was found to be extremely hazardous of administration to the psychotic patient, while pneumothorax could often be administered even when the patient was somewhat unruly.

Phrenicectomy was performed on 4 cases as the sole method for controlling basilar lesions.

Phrenic crush was done in 4 cases supplementary to thoracoplasty.

Thoracoplasty was done on 11 cases in 1 stage, and on 5 cases in 2 stages.

Sputum conversion took place in 15 cases treated by thoracoplasty. One case has remained positive. Tubercle bacilli are occasionally found in her sputum. This is probably due to endo-bronchial tuberculosis.

Sputum conversion and stabilization of the tuberculous process took place in 27 of the cases treated by means of artificial pneumothorax.

Internal pneumolysis was performed on 5 cases in 8 stages.

Internal pneumolysis can be considered among the most hazardous operations done on the psychotic. The need to have this operation performed under local anesthesia makes this procedure fraught with great risk. The sudden and unexpected change of position by the patient, with the electrode in the thorax, has resulted in one casualty.

The advent of antibiotics and chemotherapeutic agents in the treatment of pulmonary tuberculosis materially widened the field of activity in the treatment of psychotics who are ill with pulmonary tuberculosis.

In the acute phases of the various psychoses, when the patient was too ill, or too disturbed, or unapproachable for the institution of positive measures for the control of the pulmonary lesion, resort to antibiotics tided us over the crucial stages.

With very few exceptions, streptomycin administration was always feasible. We often encountered difficulty in the administration of P.A.S. and isonicotinic acid hydrazide. Some patients refused oral medication entirely, others took it only sporadically.

74 cases were given streptomycin. (18 streptomycin and P.A.S., 13 streptomycin alone or in combination with penicillin in pre- or post-operative care, 43 streptomycin alone.)

6 isonicotinic acid hydrazide alone.

6 isonicotinic acid hydrazide and streptomycin.

After a 6 weeks course of treatment with streptomycin, or when a total of 42 grams were used, the patient was re-x-rayed to evaluate the results obtained:

12 patients with minimal lesions showed marked improvement.

10 patients with minimal lesions showed progression of the tuberculous process.

28 moderately-advanced cases showed favorable response.

15 moderately-advanced cases showed progression of the disease.

21 cases with far-advanced lesions improved slightly or remained stationary.

Additional courses of streptomycin were given in 25 cases who showed further need for antimicrobial therapy.

On first glance a ward of psychotic patients presents a disheartening picture —"faceless" men and women. They sit aimlessly in the dayrooms. The grotesque attitudes, the silent mumbling or the raucous cries fill your heart with compassion and pity. The threatening looks and the silent rage often give you a feeling of helplessness and inadequacy. Can such as these be salvaged? Yet on closer acquaintance, they emerge as individuals with characteristics and moods that set them apart from one another. The hypochondriac, with his ever-varying complaints; the restless, who continually pace the floor; the furtive type; the docile and submissive; and the delusional, occupied with his thoughts and oblivious to his surroundings. There is humor, there is pathos.

Patience and proper timing is a requisite for the treatment of pulmonary tuberculosis in the psychotic. We have even been surprised at the docile and cooperative attitude exhibited by mental patients selected for pneumothorax or pneumoperitoneum who were reported to be unreliable, hostile and assaultive, but who readily responded to the suggestion to remain quietly on the operating table for the administration of these measures. The following case histories are selected at random from the files of this hospital:—

Comment: The reactivation of an apparently arrested tuberculous lesion and its rapid progression during the catatonic phase of dementia praecox, is well illustrated in this case. The Division of Tuberculosis presents a cross section of the many types of psychoses present in this institution. The predominance of the schizophrenic in this department seems to confirm "Alstrom's hypothesis", according to which schizophrenia similar to diabetes mellitus creates conditions which make for an unfavorable course of pulmonary tuberculosis.

Case 3 (John D.) Diagnosis dementia praecox, catatonic type. Admitted to this hospital December 20, 1943. On admission he was in a catatonic stupor, completely unresponsive. At times he refused to eat and required tube-feeding. He did not receive electro-shock therapy because an x-ray film of his chest showed an apparently quiescent tuberculous lesion in the right upper lobe. During his stay in this hospital his career was rather stormy. Gradually his catatonic symptoms subsided. This phase merged with a period when orientation improved, and he became active around the ward. Though his physical condition improved, the tuberculous lesion in the right upper lobe showed progression. Physical examination, confirmed by 14 x 17 x-ray film of his chest, showed a fibro-caseous cavitary lesion in the right upper lobe. He submitted readily to treatment by artificial pneumothorax, but when told he would have to remain for at least three years, until the lung condition was brought under control, he stated that "to remain that

long in this hospital is out of the question." He ran away from the institution but always came back at the end of the seven-day period for his pneumothorax refills. This he kept up for nearly a year. When told that his tuberculous lesion was quiescent he disappeared and did not return. Through the Social Service Department he was referred to a City Chest Clinic for continuation of treatment.

Comment: The spontaneous remission of mental symptoms can often be very dramatic. It is hard to conceive that the patient whose history follows had such a remarkable mental recovery.

Case 4 (Arvin C.) Diagnosis manic depressive, manic type. Admitted to this hospital August 5, 1947. This patient was pugnacious and garrulous. He frequently carried a "shiner" inflicted on him by other patients for his proclivities to snatch food off anyone's plate. His kleptomania often got him into difficulties. Under his mattress were found many articles pilfered from other patients. He was slovenly in dress and appearance. When informed that he had developed pulmonary tuberculosis he refused treatment. No effort was made to persuade him that it would be for his best interests to bring the tuberculous lesion under control. Several days after the interview, of his own volition, he requested that something be done to control his cough, and to control the severe night-sweats which were present in his case. He readily submitted to treatment for an acute exudative tuberculous lesion in the right upper lobe by means of pneumothorax. With subsidence in cough and toxemia, his talk became more coherent. A detailed history could now be obtained from him. He told of his profession as a structural engineer, and the many well-known buildings that were a credit to his abilities. This information was verified and found to be correct. He gained in weight and strength, and eventually asked for home leave. This was granted. He was allowed to return to his home in Wisconsin. Letters obtained from him were to the effect that artificial pneumothorax was being continued, and he is now gainfully employed.

Comment: To dismiss as inconsequential the many and varied complaints of the hypochondriac is a grave error. The history of this case was replete with constant demands for medication for various real or fancied ailments. Examination revealed that she had symptoms referable to the gallbladder. X-ray studies revealed the presence of gallstones. At the time of the abdominal operation, tuberculous peritonitis was discovered.

Case 5 (Bertha V. L.) Diagnosis epileptic deterioration. She was admitted to this institution April 27, 1947. The finding of an acute exudative tuberculous lesion in the right upper lobe made an intense impression on her. She developed marked hypochondria. The complaints were many and varied. She submitted readily to treatment by means of artificial pneumothorax for the tuberculous pathology found in the right upper lobe. At

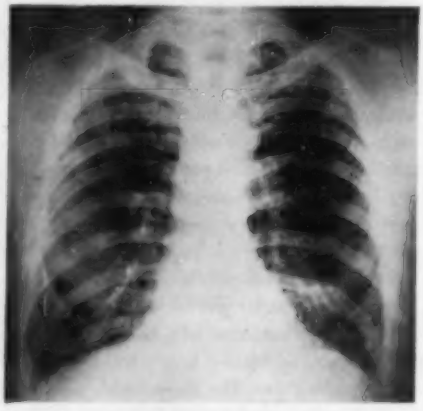

Fig. 2

The x-ray film taken 11-13-52 shows the absorption of the exudative components in both upper lobes, the stabilization of the lesion, the apparent obliteration of the cavity in the right upper lobe. This was the result of artificial pneumothorax administered from 11-27-45 to 2-19-52.

times she would refuse treatments, but fortunately, she always changed her mind before complete re-expansion of her lung took place, so that artificial pneumothorax was continued until complete stability of the lesion took place. During the course of her illness she complained of pain in the right upper quadrant of the abdomen. Cholecystography revealed many calculi. A cholecystotomy was performed. It was also found at that time that she had extensive tuberculous peritonitis. The administration of streptomycin apparently controlled the tuberculous peritonitis. At the present time she is physically well, though at times she is mentally flighty. She was discharged from this hospital and is now employed as an attendant in a Nursing Home.

Comment: The development of a psychosis in a patient while under treatment for pulmonary tuberculosis in a State Sanatorium presents many problems. The transfer of such a patient to a mental institution causes the discontinuance of measures that were used up to that time for the control of the tuberculosis. In this case it was artificial pneumothorax. When the acute phase of the psychosis subsided, the pneumothorax was absorbed and the lung re-expanded and could not be re-collapsed. Timely use of streptomycin, and later resort to thoracoplasty, controlled the tuberculous process. With physical improvement, the mental condition of this patient also showed amelioration.

Case 6 (John B.) Diagnosis dementia praecox, paranoid type. He was admitted to this hospital November 5, 1947. He was under treatment for pulmonary tuberculosis by means of artificial pneumothorax. The results were highly successful. He informs us that while at the sanatorium he gained weight, and his sputum became negative. During his five years absence from home, at the state sanatorium, his marital life deteriorated. His wife divorced him. His home was broken up. This upset in his life he blames for his mental trouble. He became morose and sullen, and developed a symptom complex that made his admission to a State Mental Institution mandatory. On admission to this hospital he was hostile, antagonistic, confused and irrational. He refused food at times. His physical deterioration was gradual and continuous. Physical examination, confirmed by an x-ray film of the chest, revealed a fibro-cavitary lesion in the right upper lobe. Artificial pneumothorax was not feasible because of complete adhesive pleuritis. After due preparation with streptomycin, a two-stage thoracoplasty was done with extraperiosteal resection of the first seven ribs. After the second stage thoracoplasty, he succeeded one night in removing the dressings and ripped open part of the thoracoplasty incision. The resulting infection was brought under control. Further convalescence was uneventful. Sputum conversion took place. He gained eighteen pounds in weight. He is now under consideration for transfer to a State Sanatorium.

Comment: Control of the spread of tuberculosis in the mental hospital by segregation of the open case is not always the solution of the problem. The following case cited can be considered in the category of a menace to the personnel of the hospital. The patient's proclivities were such that whoever came close to his bed was treated to a mouthful of expectoration accurately and unerringly directed by the patient toward doctors, nurses and attendants. This problem was solved by the performance of a one-stage thoracoplasty and the obliteration of a large cavity in the right upper lobe.

Case 7 (Edward A. Diagnosis manic depressive, hypomanic phase. Admitted to this hospital February 2, 1942. This man was found in a dazed condition near a water-front dive. Since his admission to this institution and to date he has been in a maniacal state, requiring almost constant restraint. His powerful physique

did not indicate the possibility of the development of tuberculosis in his case. However, his constant expectoration and the hurling of it at anyone who came within his reach, made an x-ray examination of his chest essential. With great difficulty an x-ray film of the chest was taken which showed a fibro-caseous cavitary lesion in the right upper lobe with a central cavity measuring 3 x 5 cm. A one-stage thoracoplasty was done with the extraperiosteal removal of large sections of the first five ribs. This brought about cavity closure and sputum conversion. Though subsequent films showed stabilization of the lesion, and though he now has no more sputum to hurl at patients and attendants, his mental status remains unchanged. However, he is no longer a menace from an epidemiological point of view.

Comment: The psychosis that develops in the course of a somatic disease presents problems that are particularly interesting from a diagnostic point of view. In this case a woman known to have pulmonary tuberculosis developed extensive progression of disease followed by an acute psychosis. The difficulty in arriving at a decision as to the etiologic factors of the psychosis is evidenced by the fact that in the differential diagnosis, psychosis due to tuberculoma and manic depressive psychosis was under consideration. With the reduction in fever and toxemia, a gradual diminution of the symptoms of the psychosis took place.

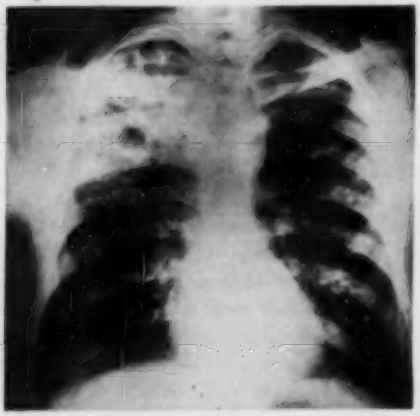

Fig. 3

The x-ray film dated 11-10-49 shows a caseous pneumonic tuberculous process involving the whole right upper lobe. There is scattered infiltration in the rest of the pulmonary area. Shallow cavities are noted in the apical region and in the sub-clavicular zone. There is bronchogenic spread to the mid-lung field. In spite of the extent and severity of the tuberculous lesion, he was actively employed in many work details, and showed little external evidence of physical deterioration. There was steady progression of the tuberculous process. Patient died 1-1-52.

Case 8 (Ella M.) Diagnosis psychosis due to somatic disease. (Pulmonary tuberculosis). Admitted to this institution February 7, 1950.

We know little about the human interest side of this case. When admitted to this institution she exhibited signs of agitated depression. She cried constantly. She seemed to be exhausted physically and emotionally. Physical examination, confirmed by an x-ray film of the chest, revealed a moderately advanced fibrocavitary lesion in the right upper lobe, and a contra-lateral spread of recent origin in the mid-lung field on the left. Sputum was positive for acid-fast bacilli. Temperature was hectic. She was given streptomycin, one gram a day, for a period of three months. She did not tolerate P.A.S. She developed gastro-intestinal upsets and frequent attacks of diarrhea. At the end of six weeks time she seemed less depressed and began to take an interest in her surroundings. Orientation became normal. At the end of three months the tuberculous infiltration in the left mid-lung field cleared up almost completely, leaving a few fibrous strands to indicate the site of the former lesion. On the right side, there was some regression of the tuberculous lesion, but the size of the cavity remained unaffected. A two-stage thoracoplasty was done in her case with the extraperiosteal removal of the first

seven ribs. Sputum conversion did not take place until nearly seven months after surgery. This was probably due to tuberculous bronchial involvement. Resistance to streptomycin developed and isonicotinic acid hydrazide was administered. With the cessation of cough and expectoration a marked change took place in the patient's demeanor. She became cheerful and cooperative. She is frequently allowed home-leave for ten days or two weeks. The possibility that this psychosis was due to tuberculous toxemia must be considered since her recovery was so dramatic.

Comment: The pronouncement by the physician of his findings of pulmonary tuberculosis, even to a normal individual, and even though done with finesse and tact, is not without its impact on the patient. The emotional stress created varies with the individual. The emotional impasse may lead the patient to seek escape from reality in various ways. The following is a case history of a woman who "took to drink" and later made an attempt at suicide because of the insistence of the sanatorium physician that a long sojourn at that institution was the only means of attaining a cure in her case. The insistence on long hospitalization when a case is easily brought under control and can be continued on an outpatient basis is frequently not in the best interests of the patient—and when long hospitalization is insisted upon dire consequences result.

Case 9 (Frances B.) Diagnosis chronic alcoholism with psychosis. Admitted to this hospital May 3, 1949. A comely, pleasant, jovial woman of forty. She now discusses her past and recent history with deep concern. She gives now a coherent and connected story of the events of the past two years. Her medical history begins with the diagnosis of tuberculosis and her admission to a local sanatorium for treatment. Her condition was amenable to treatment by artificial pneumothorax. This measure was instituted soon after her admission. Her husband visited her at the sanatorium. After about a year's time his visits became less frequent and finally ceased altogether. She "sneaked" out of the sanatorium occasionally and "drowned her troubles" in a little liquor. On one of these absences from the sanatorium she tried to commit suicide by ingesting an undisclosed number of aspirin tablets. She was taken in a semiconscious condition to the Philadelphia General Hospital.

On admission to the Philadelphia State Hospital she displayed disorientation, confusion and irrationality. She was hostile and threatening in her attitude. Afternoon temperature showed a rise to 102. Sedimentation rate a drop of 80 mm. in the first hour (Westergren method). Sputum was positive for acid-fast bacilli. An x-ray film of the chest revealed the absorption of the previous artificial pneumothorax. She now exhibited a fibro-caseous cavitary lesion in the right upper lobe. During this crucial active stage of her tuberculosis she was treated with streptomycin and P.A.S. With the reduction of fever, cough and expectoration, the patient became slightly more cooperative. After six months sojourn at this institution she was considered a suitable case for surgery. A two-stage thoracoplasty was done with the extraperiosteal resection of large portions of the first seven ribs. She is now on home-leave and reports regularly to the Neuropsychiatric Clinic. The mental and physical rehabilitation of this patient has been short of phenomenal.

Though we have a wealth of clinical material in this hospital, many angles and facets of the treatment of the mentally ill, in whom tuberculosis intervenes, remain unanswered. It is admitted that the chances for recovery or amelioration of many types of psychosis depend upon the early institution of electro-shock therapy in the properly selected cases. However, the development of tuberculosis causes the

cessation of all active measures which have been instituted for the treatment of the psychosis.

Is electro-shock therapy contraindicated in all forms of pulmonary tuberculosis?

Is the reactivation of pulmonary tuberculosis always the concomitant of electro-shock therapy?

Can electro-shock therapy be used in a case brought under control by means of artificial pneumothorax? Could it be used while artificial pneumothorax is administered, or should it be delayed until pneumothorax is abandoned and the lung allowed to re-expand?

How long after a successful thoracoplasty or pulmonary resection can electro-shock therapy be instituted?

Can reactivation of the tuberculous lesion be prevented by the use of antibiotics or chemotherapy while electro-shock treatment is being administered?

Case 10 (Mary C.) Diagnosis schizophrenia, catatonic type. Admitted to this hospital May 13, 1947. This case is illustrative of the point that an apparently arrested case can be reactivated by electro-shock therapy. A pretty girl of twenty-five years of age, but juvenile in appearance, was admitted to the Division of Tuberculosis with a minimal exudative lesion in the right upper lobe. Her hostile, resistive attitude precluded treatment by means of artificial pneumothorax. However, she responded well to treatment by means of strict bed-rest and streptomycin. At the end of a year's time the lesion in the right upper lobe appeared to be apparently stabilized. In the meantime her mental condition showed steady deterioration. She was confused and irrational, and frequently disoriented. Her speech was rambling and incoherent. At times her speech content was a veritable word-salad. She acted frightened and apprehensive. She seemed to be hallucinated, and reacted to her hallucinations by keeping herself covered with her bed covers. Electro-shock therapy was then instituted. Within a period of six weeks after the initial treatment, loss of weight was noted, slight cough developed, and for the first time since her hospitalization in this institution her sputum was found positive for acid-fast bacilli. Electro-shock therapy was discontinued. She was again given a course of streptomycin for the reactivated lesion in the right upper lobe and the newly-found tuberculous exudative lesion in the mid-lung field on the left.

Case 11 (T. G.) Diagnosis dementia praecox, hebephrenic type. Admitted to this hospital July 29, 1949. He developed an acute exudative tuberculous lesion in the right upper lobe. This responded to treatment by artificial pneumothorax. His sputum became negative for acid-fast bacilli. The contra-lateral lung was clear. It was felt that after two years of collapse therapy no untoward results should occur in this case from the treatment of his psychosis by means of electro-shock therapy. However, after two months of electro-shock treatment, there was marked physical deterioration in this case. An x-ray film of the chest revealed the development of a new caseous exudative cavitary lesion in the left upper lobe.

The selection of patients in the Division of Tuberculosis for electro-shock therapy is based on two factors:—

1. The apparent stabilization of the tuberculous lesion.

2. The need for control of behavior problems.

No attempt was made in the selection of patients to classify them according to their mental diagnoses. The patient who was agitated, severely depressed, or required constant restraint, or was assaultive, was recommended for electro-shock therapy. The impression gained from the observation of a small group (14 patients) is that electro-shock therapy is a measure to be used with great caution in the tuberculous mentally ill. It is possible, with greater experience and the observation of a larger number of patients

than was studied in this series, that tuberculosis will be considered an absolute contraindication to electro-shock therapy, and resort will be to the greater use of psycho-surgery in this group.

It is true that in the selection of patients for active anti-tuberculous therapy, a better type of patient, from a mental point of view, is chosen. Nevertheless we are so impressed with our observation that mental improvement frequently follows control of the tuberculosis, we have come to the conclusion that this is not an accidental happening. Several factors probably play a part in bringing about these results:

1. A rapport is created between the physician and the patient. The concern exhibited by the physician for the patient's welfare creates a responsive chord in the patient. The frequent inquiries as to his welfare arouses in the patient a desire to be confiding, or a sympathy-seeking attitude.

2. The change produced by environment must also be given due credit. The tuberculosis ward has more of the characteristics of a sanatorium with the enforced rest-hours, the super-alimentation and the realization by hospital attendants and nurses that here we are dealing, in this department, with physical as well as mental disability.

3. It is possible that the morale of the patient is raised by the attention given him, and it may act as a "total-push" and set him on the road to mental rehabilitation.

4. The possibility is that many patients admitted to this department, after long sojourn in the institution, have passed through the acute phases of the psychoses, and are now in the stage of spontaneous recovery.

Conclusions

1. Taking into consideration the fact that many psychotics, ill with pulmonary tuberculosis, are uncontrollable and unapproachable, and in further recognition of the fact that in many types of psychoses tuberculosis is rapidly progressive, isolation and segregation is still the mainstay in the program for controlling the spread of tuberculosis in this institution.

2. The advent of antibiotics and chemotherapy has greatly broadened the scope and activity of the measures that we can apply to control tuberculosis in the mentally ill. Paradoxically—the benefits of antibiotic and chemotherapy will enhance and increase the scope of the tuberculosis problem in institutions for the mentally ill in years to come. The control of reactivated tuberculous lesions, the tuberculous pneumonias, the change of acute pulmonary to benign or slowly progressive types will make the need for larger facilities and more hospital beds for the tuberculous psychotics.

3. Fluorophotographic chest surveys of the population in the mental hospitals should become a standard procedure.

4. Collapse therapy (pneumothorax-pneumoperitoneum) is possible in a select number of psychotics.

5. Thoracoplasty and pulmonary resection in the properly selected case is the method of choice for speedily and effectively controlling the open case.

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Management of Seborrhea Capitis and Associated Disorders

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Seborrhea and premature alopecia are the most prevalent disorders of the hair and scalp, which are seen by the dermatologists and the general practitioner.

Seborrhea is divided into:

1. Seborrhea, sicca
2. Seborrhea, oleosa

Alopecia is classified as:

1. Premature
2. Areata
3. Totalis

In an academic discussion of this type it is advisable to discuss the anatomy and physiology of the hair and scalp briefly, so as to reacquaint the reader with the morphologic background of the tissues.

Savill[1] provides an excellent description of the structural features under discussion.

A cross section through the skin reveals from the external surface downwards, the epidermis consisting of the stratum corneum, stratum granulosum, prickle cell layer, stratum germinativum or basal cell layer, and the papillary bud. The dermis consists of the appendages of the skin, elastic and fibrous tissues. The appendages consist of the hair apparatus, sebaceous glands, sweat glands, erector pili muscles and the nerves or pacinian corpuscles.

The Hair Shaft consists of the medulla, the cortex or middle part, and cuticle or outer part. Lanugo hairs are differentiated from the other hairs in that they are smaller hairs and have no medulla, and are usually lacking in pigment. When a hair is about to be lost, a void or empty space is formed between the bulb of the hair and the medulla and gradually the hair shaft is loosened and eventually falls out, leaving an empty hair follicle.

The hair papilla is nourished by a small plexus of blood vessels, and we believe that hair growth and strength depend upon a continuous rich vascular supply, bringing with it essential elements for maintenance of nutrition of the hair papilla, which in turn nourishes the hair shaft follicle.

Sebaceous glands which are located in the dermis, lubricate the hair by means of sebaceous secretion known as sebum. The number of glands furnishing this lubricating fluid to the hair may vary in number from one to six. The strength and length of the hair shaft is not, in our opinion, related to the amount of sebaceous secretion. As histological studies have demonstrated, strong hair may be supplied by one sebaceous gland and a thinning hair may be surrounded by five sebaceous glands. Experimental clinical research is being conducted in laboratories and hospitals regarding possible relation-

ship of sebaceous secretion and sweat excretion to the index of hair growth. There are capillary blood vessels and lymphatics which supply the hair follicles and sebum secreting glands.

The Blood Circulation of the scalp consists of arteries and veins originating in the subcutaneous tissue, and transversing upwards to the appendages of the skin. The blood supply of the hair is furnished from a superior and inferior plexus of circulating vessels. The upper part of the vessels originate from the superior plexus; the lower part of the hair shaft and hair papilla receives its vascular nourishment from the blood vessels which are part of the deeper plexus. As the circulation is diminished, nourishment to the papilla decreases with the subsequent diminished reproduction and growth of the cells which form the papilla of the hair.

It would be interesting to attempt to determine the impaired and sluggish circulation of the hair papilla and the scalp tissues by research studies being made following the intravenous injection of fluorescein, as suggested by Lange.[1] Plans are being formulated for these studies which we believe will be original, highly provocative and informative when published.

The secretion of the sebaceous glands are known to be affected by:

1. Diet
2. Emotional disturbances
3. Endocrine stimulation

In relation to diet, the oral intake of excessive carbohydrates and the readily absorbable animal and vegetable fats influence the activity of sebaceous glands to hypersecretion. Emotional instability through the dysfunction of the sympathetic nervous system may cause over activity of sebaceous glands, with resulting increased sebum. When there is an increase in the androgen production which disturbs the normal estrogen androgen secretion relationship, there is an over abundance of sebaceous secretion. This condition is observed frequently in the acne vulgaris of the adolescent male.

Wile[2] in his analysis of gonodal activity demonstrated that patients afflicted with adolescent acne, excrete larger amounts of androgen than a control normal group. He suggested that there must exist an apparent complex hormonal imbalance rather than the involvement of a single factor. In his studies, he states "The ratio of the daily excretion of androgen to that of estrogen for the normal man was found to be 8.9, whereas for the man with acne it was 19.8, more than twice as great." Very frequently, the alopecia prematura is associated with acne and seborrhea.

The relationship between acne vulgaris and excessive excreting sebaceous glands has been excellently described by Sulzberger[3] and Witten[3].

Lubowe[10] has reviewed the dermatological literature and summarized the acne seborrhea and alopecia syndrome. He also makes some original suggestions as to internal and external therapy.

Hamilton[4] in discussing the phase of hormones in relation to acne states that despite the correlation between acne and androgens, there is no proof that all forms of acne are caused by excessive androgenic secretions, indicating that the production of acne in the female may be of a somewhat different etiology.

Phillip[6] has demonstrated that the local application of micronized stilbesterol lotion was effective in clearing acne in the adolescent male; in the female the results were ineffective.

The Sebaceous Glands secrete one to two grams of sebaceous material daily. Chemical analysis of this secretion reveals:

oleic acid	Cholesterol
palmitic acid	Inorganic salts
stearic acid	Epithelial debris
	water

Cholesterol and ergosterol are very closely related. The chemical synthesis of choles-

terol to ergosterol by exposure to ultraviolet light has been demonstrated by Steinboch.

The coiled sweat glands have their openings present on the surface of the skin of the scalp. The sweat glands lie deeper in the dermis than the sebaceous glands.

Analysis of the secretion of the sweat glands reveals: sodium chloride, creatin, urea, ethereal sulfates of indole, skatole; albumin, fatty acids: undecylinic, propionic, caprylic; water.

The etiological factors featured in seborrhea capitis are:

1. Dietary
2. Infectious
3. Emotional tension
4. Trauma of the scalp

In recognition of the seborrheic dermatitis sicca, which usually involves the scalp, the inferior hair margins, the postauricular surfaces, the eyebrows, the butterfly area of the face and the presternal area, there is evidence of erythema and adherent dry scales. There are present perifollicular erythematous vascular papules, which become confluent, forming patchy erythematous areas with dry and greasy brownish scales.

Patient may complain of dryness and itching of the scalp with flakiness, and presence of dandruff. The flaky material covers the clothing which rests under the scalp, ears and neck. The attempt to remove these scales by traumatic excursions with the finger nails is very common.

Over indulgence in excessive starch, carbohydrate, and fatty diet causes over activity of the sebaceous glands with increased secretion of the sebaceous material. This dries and forms inspissated scales on the scalp and the other areas of predilection. The seborrheic soil acts as a growth media for bacteria and fungus as pityrosporum ovale.

The Infectious Theory has been propounded by Unna[4] and many other dermatologists. The organism pityrosporum ovale has been found frequently in the bacteriologic studies of the scalp of seborrheic capitis. This finding seems to be more frequently noted in the above condition, than found in the normal debris of the scalp.

Frequently, patients with itching and discomfort of the scalp will also present signs of emotional instability, and repeatedly traumatize the scalp with resulting excoriations, small bleeding areas and infection of the hair follicles. This stress and strain may also be aggravated by listening to television, radio programs, and observing our highly spectacular motion pictures of today. Seitz[1] believes that patients who are neurotic with an excoriating and itching complex are victims of frustrations. "These unexpressed feelings of rage and guilt, as well as the strong repressed needs for love, may find symptomatic expression in the form of scratching. Excoriation appears to serve the complex functions of muscular release of the physiological tension created by repressed rage, atonement for guilt through mutilating self-punishment, and gratification of the need for love through cutaneous erotic masturbatory pleasure."

Hickey[2] observed that during a period of ten years, two hundred cases of blepharitis seemed to have their original etiology in a seborrhea of the scalp. He found that treatment of seborrhea of the scalp frequently favored the more rapid cure of the chronic blepharitis. He particularly suggested that if patients with blepharitis have seborrhea of the scalp, that following shampoo of the head, it was advisable that the scalp should be cleansed in such a manner that the shampoo water containing the pityrosporum ovale and debris must not come in contact with the face and lids. This is done by covering the hair with an impermeable rubber cap when taking a shower, or by covering the eyelids and face when a shampoo is indulged in. It is also suggested that the hair must not be combed

over the face as some of this material may fall on the eyelids. Because the eyelids become easily inflamed when precipitated sulfur is applied locally, the indicated therapy is two percent yellow oxide of mercury in a petrolatum base.

Pipkin[9] has studied a large number of cases of scaling of the scalp which did not react to the usual local therapy. He found that after culturing the scales of the scalp, he frequently found the causative agents to be fungi. The organisms found most frequently were the common fungi.

The Method of Therapy employed in the treatment of seborrhea of the scalp consists of:

1. Shampoo of the scalp.
2. Local medication consisting of antiseborrheic preparations.
3. Stimulation of the scalp with ultraviolet or cold quartz.
4. Stimulating scalp lotions containing resorcinol, euresol, salicylic acid, chloral hydrate, bichloride of mercury in glycero-aqueous alcoholic vehicles.

In the treatment of seborrheic dermatitis of the dry type (sicca), it is advisable that a shampooing of the scalp precede the anointment of the hair and scalp with the prescribed ointment. Various types of shampoos have been utilized, amongst the most popular being:

1. Tincture of green soap.
2. Tar shampoo.
3. Castile olive oil shampoo.
4. Soapless detergent shampoo.

Tincture of green soap is antiseptic and cleansing. However, because of the excessive amount of alcohol it contains, frequently the scalp and hair become quite dry following its constant use. This can be avoided by application of heated olive oil rubbed into the scalp with the fingertips by moderate massage, following the shampoo.

Tar shampoo is utilized when a stimulating and cleansing shampoo is desired. However, there have been cases of dermatitis venenata reported after the continuous use of a tar preparation. Therefore, the patient's scalp must be carefully and regularly examined after long usage.

Probably the most popular type of shampoo is the castile olive oil shampoo which contains a cocoanut oil solution and dissolved flakes of Castile Soap, with a small quantity of olive oil to prevent excessive drying due to the high alkalinity of the soap.

The Average Scalp is cleansed excellently with the above type shampoo, and no cases of sensitivity have been reported in those cases where sensitivity to soap exists.

The soapless detergent shampoos are either neutral or have a pH from 6.0 to 7.5. They may be anionic, nonionic, and cationic. They are excellent cleansing agents and leave the hair glossy and bring out the highlights. They occasionally leave the hair and scalp dry. The use of soapless detergent shampoo should be followed by massaging of the scalp with olive oil, or it can be dispersed in the shampoo.

1. Tar shampoo

Liquor carbonis detergens	10.0
Soft soap	50.0
Alcohol q. s. ad.	120.0

2. Shampoo (Oily scalp)

Rose water	25.0
Soft soap	50.0
Alcohol, 95% q. s. ad.	120.0

3. Shampoo (Dry scalp)

Essential oil	1.0
Glycerin	3.0
Vegetable oil	6.0
Alcohol	10.0
Soft soap	50.0
Water q. s. ad.	120.0

To the above and other shampoos we have been adding hexachlorophene 2%. It is an antibacterial agent and a deodorizer. The inclusion of soluble lanolin products, as isopropyl lanolin, have been suggested and found to be of cosmetic value when included in shampoos.

The popular antiseborrheic remedies are:

1. Salicylic acid	1.8
Precipitated sulfur	3.0
Hydrophilic ointment, USP q. s. ad.	60.0
2. Salicylic acid	1.8
Ammoniated mercury	3.0
Hydrophilic ointment, USP q. s. ad.	60.0
3. Vioform	1.8
in petrolatum q. s. ad.	60.0
4. Precipitated sulfur	3.0
Bacitracin-Neomycin ointment q. s. ad.	60.0
5. "Topotar" ointment	
Coal tar solution gm.	5.0
Colloidal sulfur	2.5
Salicylic acid	3.0
Zinc oxide	5.0
Hydrophilic ointment (modified q. s. ad.)	100.0

For anti-pruritic effect, one-half per cent menthol can be added to the above basic prescriptions.

The ointment is rubbed into the scalp nightly. It is essential that the hair be parted while applying the medicated ointment or hair lotion so as to cause a therapeutic effect on the scalp itself.

Frequently it is necessary to prescribe a stimulating and antiseptic hair lotion to be used on the scalp during the day. It is advisable to maintain application of the medicament on the scalp around the clock. It is essential to determine whether we are dealing with an oily or dry scalp, and to prescribe the indicated preparation to correct this scalp disorder.

Alopecia of The Scalp, with loss or thinning of the hair of the scalp, occurs in various forms such as diffuse, circumscribed or patchy. The diffuse may be divided into three categories as follows: Premature, senile, and toxic.

Premature alopecia occurs at the commencement of the second and third decade of life in the male, and is manifested by thinning or loss of hair in the frontal and parietal, and occipital regions. The etiologic factors are thought to be a familial genetic type with relationship to inheritance.

Our discussion in this paper will be basically confined to premature alopecia as an individual entity, and in association with seborrhea capitis.

Sabouraud[18] and Hamilton presented evidence that the over production of the androgen substances plays an important role in the causation of baldness in the male. The presence of a seborrheic soil or seborrheic dermatitis with over secretion of sebaceous material, and a diminution in circulation to the hair papilla are also probable factors in producing premature alopecia.

Goldzieher[19] and Shapiro[20] have studied the topical application on the scalp of estrogen preparations for the treatment of itching, scaling, and associated hair fall. The former utilized concentrations ranging between 1.5 and 3.0 mg. per 100cc. of a lotion in an aqueous alcoholic base. Shapiro, in his clinical investigations, supplied estrone lotions which were more concentrated. His compound contained 1 mg. of sodium estrone sulfate per cc. in 70 per cent alcohol. They concluded that the topical estrogen preparation can control the symptoms of scaling, scurf, itching, and hair fall.

We have found similar therapeutic application in our study; however, after continuous use of the hormonal substances, the seborrhea and associated hair fall become refractory.

The Frequently Prescribed Hair Lotions are formulated below:

1. Scalp lotion (oily scalp)	
Euresol	2.0
Salicylic acid	2.0
Glycerin	6.0
Diluted alcohol to make	120.0
2. Scalp lotion (dry scalp)	
Euresol	2.0
Salicylic acid	2.0

Castor oil	12.0
Ethyl alcohol to make	120.0

3. Scalp lotion (containing quinine hydrochloride)

Quinine hydrochloride	1.0
Tincture of capsicum	2.0
Tincture of cantharides	6.0
Glycerine	6.0
Alcohol	32.0
q.s.ad.	100.0

4. Scalp lotion (containing estrogenic hormones)

Estrogenic hormone	.003
Polyethylene Glycol	10.0
70% Ethyl alcohol q.s.ad.	120.0

We have been clinically evaluating a combination of an estrogenic hormone and solubilized amino acid preparation for the topical treatment of seborrhea capitis and the associated premature alopecia.

The use of amino acids for topical application has been recommended because of the high sulfur amino acid content of the hair and the hair follicle.

Judging from its initial use, we believe that beneficial results have been obtained in the reduction of the seborrhea and the diminution of the loss of hair.

A clinical preliminary report will be submitted shortly.

The Relationship of Seborrhea to nutritional disturbances has been adequately described by many investigators. The advisability of avoiding excessive amounts of carbohydrates, fats, alcohol, spices and other highly seasoned products has been frequently emphasized. Supplementation of high Vitamin B complex, specifically riboflavin and pyridoxine, is often helpful.

Schreiner[13] has recently found that patients treated with desoxypyridoxine, a pyridoxine antagonist, developed a scaling, itching dermatitis of the scalp which was clinically indistinguishable from seborrheic dermatitis. These patients were then given oral and intramuscular pyridoxine therapy without affecting the local seborrhea. He then treated the patients topically with an ointment containing 10 mg. of pyridoxine per gram of ointment base. The seborrheic-like lesions then cleared very rapidly. The above favorable response to the B_6 vitamin ointment in these cases, indicates that there is a relationship between seborrhea and a local metabolic dysfunction of pyridoxine.

Andrews[14] observed that beneficial results were obtained following the use of vitamin B_{12} intramuscularly in a varied group of seborrheic dermatitis. He also believes that there is a relationship between this entity and nutritional deficiencies.

The author has found that in nearly all cases of facial seborrhea, aggravation follows the local application of alkaline soap and shaving cream.

Recently, there has appeared on the dermatological horizon a preparation known as Selsun, which is a two and a half per cent emulsion of selenium disulfide. It has been heralded as an effective treatment of seborrhea. However, one must be careful of its untoward implications, especially when accidently taken internally. Slinger[15] reported that of one hundred and four patients treated with the selenium disulfide emulsion, complete control was effected in 95.4 per cent of the patients with moderately severe seborrhea capitis. Favorable results were observed in most of the patients in four to eight weeks. We are clinically evaluating this product in our office practice in an attempt to compare its therapeutic efficacy with other known modalities. Its use helps temporarily to clear up the scaling seborrheic dermatitis of the scalp.

Flesch[16] described the local depilatory action of unsaturated compounds in rabbits and guinea pigs. He concludes from his experiments that a single local application of allyl laurate, allyl benzoate, allyl diphenylacetate, and squalene and repeated applications of vitamin A caused reversible hair loss at the site of the ap-

plication. He also emphasized that local application of human sebum causes reversible hair loss in rabbits and mice. These original findings may have a revealing application in the etiology and pathology of the seborrheic alopecias.

Conclusions

Seborrhea of the face and scalp have been observed frequently in patients presenting an acne-seborrheic diathesis.

Seborrhea is associated with a nutritional and physiological dysfunction specifically associated with improper intake and usage of carbohydrates, fats, and vitamin B complex. The estrogen-androgen hormone imbalance is being given greater significance.

The treatment of the seborrheic diseases consists of proper face and scalp hygiene, avoidance of high fat and carbohydrate diets, and mild soothing and stimulating topical applications.

An estrogen-solubilized amino acid preparation seems to be of promise in the treatment of seborrheic capitis and associated premature alopecia.

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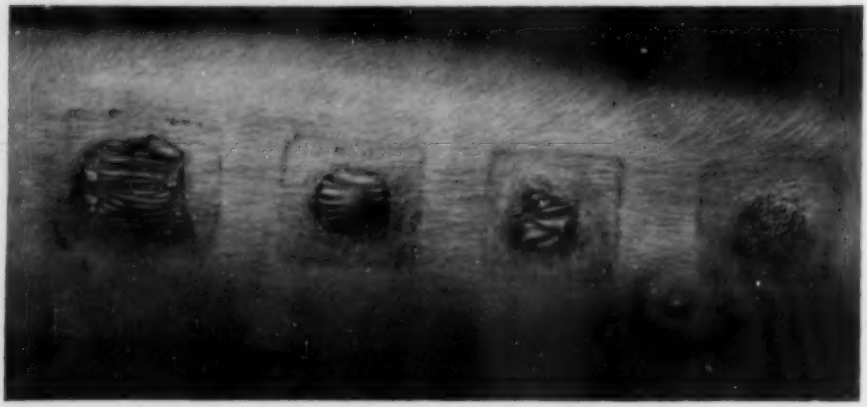
Clini-Clipping



Results of patch tests on forearm of patient hypersensitive to iodine. The Concentrations from left to right were ½, 1, 1½, 2 per cent iodine (after Becker and Obermayer).

Parenteral Usage of an Antihistamine

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Oral antihistamines are a valuable adjunctive therapy in the treatment of allergic disorders. However, their use has not lessened the need for proper allergic management and specific therapy. Topical antihistamine therapy is also useful under appropriate circumstances. Compared with the clinical information available on the oral use of antihistamines, little is known regarding the parenteral usage of these drugs. This report deals with some of the clinical applications of Chlor-Trimeton Maleate Injection in a concentration of 100 mg./cc.*

Simon[1-3] has shown that antihistamines, including Chlor-Trimeton, when administered together with penicillin substantially reduce the incidence of sensitivity reactions. Sanger, et al.,[4] Maslansky and Sanger,[5] and Jenkins[6] record similar observations. These investigators present several other important clinical applications of Chlor-Trimeton Maleate Injection. The present study confirms previous reports, and suggests other fields of usefulness.

Materials And Methods Chlor-Trimeton Injection 100 mg./cc. was employed in this study. The high concentration of this antihistamine coupled with the potency permits the administration of a therapeutic dose in a small volume of solution. Chlor-Trimeton by oral administration is reported to be an effective well tolerated antihistamine having a relatively low incidence of side effects.[7-10] Eighty-nine patients received a total of seven hundred fifty prophylactic or therapeutic injections of the drug. It has been injected with antigens, penicillin, Mersalyl, liver extract and B_{12} vitamin especially in sensitive patients. The effect of the antihistamine in preventing or relieving existing reactions was determined.

Chlor-Trimeton was added to any of the above substances and the solutions mixed by rotating the syringe. The combination was then administered subcutaneously or intramuscularly in the usual manner. No incompatibility was observed between Chlor-Trimeton and any of these preparations.

Results

Desensitization — Irregular Visits Among patients undergoing perennial therapy there were 21 who failed to adhere to their regular schedule of injection at 3-4 week intervals. Eleven presented themselves for treatment after a lapse of 5 weeks, seven after 6 weeks and three after 7 weeks. The last administered dosage of antigen ranging between 2,000 to 10,000 P.N.U. was injected along with 10 mg. of Chlor-Trimeton Maleate in each instance. No reactions either immediate or delayed occurred in this group. Previous experience with these patients reveals that in order to avoid reactions most of them required a reduction in antigen dosage whenever their injection schedule was irregular.

* Schering Corporation, Bloomfield, N. J.

Hyposensitization — Intolerance to Antigen Twenty-one patients were involved in this phase of the study. In each instance any attempt to increase the amount of antigen resulted in moderate to severe local or constitutional reactions. Table I illustrates the increase in maximum tolerated dose of antigen when 10 mg. of Chlor-Trimeton Maleate was added to the antigen.

The question of whether or not it is advantageous to increase the amount of administered antigen is still the subject of controversy. However, it is the author's opinion that the patients in whom this was achieved had a more comfortable season than previously obtained in spite of the fact that the 1952 ragweed season was relatively severe in this area.

Therapy of Pollen Antigen Reactions Sixteen patients who reacted after antigen injections without Chlor-Trimeton Maleate were rapidly relieved af symptoms such as sneezing, itching, pain following the injection of 10 mg. of Chlor-Trimeton Maleate subcutaneously.

Prophylaxis of Penicillin Reactions Fourteen patients who had exhibited some previous reactions to penicillin in the form of urticaria, dermatitis, or angioedema were given injections of Chlor-Trimeton Maleate 10 mg. plus penicillin for 2-5 days. No reactions occurred in this group. Admittedly the series is small, but the findings are in line with those of Simon,[1-2] Sanger et al.,[4] and Maslansky and Sanger,[5] each of whom has reported excellent results using a mixture of Chlor-Trimeton Maleate with penicillin as a routine injection.

Prophylaxis of Drug Reactions After the injection of certain drugs or biologicals a number of patients develop local reactions consisting of induration, swelling, erythema, itching or dermatitis. In some instances, systemic reactions such as nausea, vomiting, urticaria, or angioedema are noted. In an effort to obviate these reactions, 10 mg. of Chlor-Trimeton Maleate was added to each injection of liver, B_{12} or Mersalyl, in patients who had exhibited prior reactions. Results are listed below:

a) Five patients tolerated 10 weekly injections of Mersalyl, without reactions.

One patient developed urticaria and drug was discontinued.

b) Six patients tolerated 8 weekly in-

TABLE I

Desensitization with Pollen Extract and Chlor-Trimeton Maleate by Injection

No. Patients	Maximum Tolerated P.N.U. of Antigen	
	Without Chlor-Trimeton	With 10 mg. Chlor-Trimeton
1	200	600
2	200	800
1	40	150
1	20	90
1	30	90
1	70	300
1	1,000	1,800
1	1,000	2,000
1	1,000	1,900
1	1,500	2,500
4	2,000	3,500
1	2,500	3,500
4	3,000	5,000
1	7,000	10,000
1	7,500	10,000

jections of liver extract without reactions.

One patient developed urticaria and injection discontinued.

c) Two patients tolerated 10 weekly injections of B_{12} vitamin without reaction.

Insect Bites Five cases of hornet or bee bite were treated by an initial injection of 5 mg. of Chlor-Trimeton Maleate subcutaneously at the site of the bite, followed by another 5 mg. in 20 minutes. Tablets of Chlor-Trimeton Maleate were prescribed for 1-2 days after local therapy. Four of the patients were children between 5-10 years of age. One adult had generalized urticaria in addition to local discomfort following the bite. All patients were rapidly relieved.

Side Effects Dosage ranged between 5 to 20 mg. One or two patients experienced nausea, dizziness, and a feeling of weakness with 20 mg. of the drug. These side effects were quickly relieved, however, by having the patient lie down for a few minutes. The ultimate dose of 10 mg. of Chlor-Trimeton Maleate was administered about 700 times in this study with only an occasional case of mild dizziness being observed at this dosage level.

Summary

Chlor-Trimeton Maleate Injection, in an average dose of 10 mg., is a well tolerated antihistamine, having few side effects. Its use in combination with drugs to which patients have previously experienced either local or systemic reactions prevents the occurrence of these reactions in most cases. This action is of particular value when a drug of choice such as penicillin must be administered in spite of a known or suspected sensitivity. Chlor-Trimeton Maleate in combination with antigens permits a two to four-fold increase in amount of antigen tolerated by highly sensitive individuals. Its use minimizes the risk of local or systemic reactions to antigens in patients undergoing desensitization therapy.

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191 South Avenue

Clinico-Pathological Conferences

New York University-Bellevue Medical Center Post-Graduate Medical School, Department Of Medicine at Bellevue Hospital, Fourth Medical (N. Y. U.) Division

PATIENT W.B.

This was the second Bellevue Hospital admission of W.B., a 71-year-old white male who entered because of progressive drowsiness and occasional "dizzy spells" for two years. For nine months he had increasing anasarca.

First Admission (9-6-51 to 9-12-51) The patient was admitted to the emergency ward in semi-coma without available history. History obtained later revealed that the patient usually went into a deep sleep after a large meal. There were no other specific complaints. On the evening of admission, the patient ate heartily, was put on a train in a somewhat sleepy condition and could not be aroused when the train reached its destination.

Physical Examination: T.-94; P. 90, irregular; R-20, BP 220 over 100.

Examination revealed a semi-comatose, chronically ill appearing elderly male without dyspnea, orthopnea or cyanosis. Head and skin were unremarkable. Fundi were not visualized. Neck was supple; veins were flat. Lungs were clear. Heart was unremarkable except for frequent PVC's with coupled rhythm and harsh apical systolic murmer. Abdominal and rectal examinations were unremarkable. There were bilateral Babinskis with generalized hyporeflexia.

Hospital Course — The patent became alert and oriented within 12 hours. Spinal tap revealed normal pressures and 3+Pandy. A heavy meal revealed no lethargy.

Second Admission (6-5-52, died 7-16-52) The patient improved after discharge over a period of several months. Nine months PTA, he again began feeling drowsy and had frequent "dizzy spells". He also developed some loss of appetite and progressive anasarca beginning in dependent portions. He also developed occasional chest pain and progressive exertional dyspnea. Pt. had apparently been attending the medical clinic for a hypochromic anemia unresponsive to iron therapy.

Past History: In 1948, pt. was in Harlem Hospital unconscious for three days from head injury. He was told of 'diabetic tendency'.

Physical Examination: T.-98.9, P-60, R-18, BP-200 over 100.

The pt. was mentally alert and in no acute distress. Outstanding findings were: extensive pitting edema of lower extremities and abdominal wall especially posterior and sacral areas. Posterior chest wall and arms were also quite edematous. The edema was soft and boggy except for the legs which were quite taut.

Neck veins were distended and filled

from below. B.S. were distant but no rales heard. Dullness to percussion at both bases.

Heart enlarged to left. NSR with sounds of fair quality. A harsh systolic murmer was heard over the entire precordium. No palpable abdominal organs or masses. There was edema of genitals. Rectal examination was negative. Neurological exam. was unsatisfactory because of edema.

Hospital Course–A tentative diagnosis

Laboratory Data

URINE

Date	Sp Gr	Color	pH	Alb.	Sug.	Acet	WBC	RBC	Other
9-5-51	1.012	clear yellow	acid	4+	0	0	4-6	3-5	many bac. Occ. hyal. cast
9-6-51	1.010	brown	7.5	4+	0	0	few	loaded	Hyal. and gran. casts
6-6-52	1.020	PALE Y.	acid	1000 mg.	1+		6-10	rare	Hyal. and gran. casts
6-24-52	1.006	Pale Y.	acid	Trace	0		numer-ous clumped	0	
7-11-52	1.008	amber	alk.	100 mg.	0		many	0	Bacteria

BLOOD

Date	RBC	Hb	WBC	Tr	P	L	M	E	B	Smear	ESR	Hct
9-6-51	4.1	12.5	6.4	3	83	14	0	0	0			
6-6-52	3.04	11.0	4.2	8	52	39	0	1	0	Atypical lymphos	62	33
7-2-52	3.23	10.5	17.55									
7-14-52		10.0	2.2									

Blood Chemistries

Date	Sug.	BUN	CO2	A/G	Chol/Esters	II	CFT	Alk P'tase	Na	K	P	Cl	Creat.
6-6-55	69	7		1.8/3.0	214/150	3	neg	3.1			3.4		
6-24-52		72	17						137	3.4			
6-27-52		117	11						144	3.7			
7-7-52			35						150	2.3		116	1.8
7-14-52			17						122	2.5			2.2

Miscellaneous

Spinal tap 9/6/51; I.P. 120, F.P. 150, Pandy 3+, Wassermann negative.
Urine culture 6/23/52 Aerobacter aerogenes and hemolytic enterococcus.
EKG on 6/6/52 LDEA, mid-position, N.S.R. Normal tracing with no significant changes from previous.
X-rays: 9/11/51 Chest x-ray reveals heart within normal limits, accentuated aortic knob. Lungs clear. Possible coronary artery calcifications.
7/14/52 Chest x-ray as above plus patchy infiltration RLL. Abdominal plate shows no free air beneath diaphragm.

of anasarca due to renal disease (with CHF to be ruled out) was made. The pt. was put at bed rest on a low salt diet with digitalization and mercurials. The anasarca disappeared but pt. continued to appear weak and lethargic. BUN and creatinine rose progressively and the pt. became comatose. He was fed by tube a diet high in CHO, moderately low protein and fat and salt free. Electrolyte balance was maintained by giving K in the tube feedings.

On 7-14-52 the patient had a sudden severe hematemesis followed by more or less continuous vomiting of coffee ground material. Abdomen was distended with marked tympany over the superior portion. The possibility of perforation of the stomach was considered. No free gas was present on x-ray of the abdomen. Pt. began coughing up dark brown frothy material. Moist rales were heard over both lung bases. Chest x-ray showed extensive patchy pneumonitis involving entire right lower lobe. Impression at that time was that the patient had developed aspiration pneumonia in RLL with acute pulmonary edema. He was bronchoscoped but no obstruction was found. Some bloody, mucoid material was seen exuding from right lower lobe bronchus. Patient went downhill rapidly. BP became unobtainable and on 7-16-52 the patient expired quietly.

Case presented from the wards of the Fourth Medical Division, Bellevue Hospital, Dr. Charles Wilkinson, Dir.

Write your own clinical impression on formulation here, if you wish.

Pathological Findings

This is a rather unique case of *amyloidosis of the kidneys*. The lesions are quite typical of secondary amyloid nephrosis but are unusual insofar as 1) no suppurative or other primary cause of the amyloidosis is present and 2) the lesions are confined to the kidney. Although, by definition, this may be classified as primary amyloidosis, it might perhaps be distinguished from the usual primary amyloidosis of the kidney in view of the extensive glomerular involvement (1). In 107 cases of renal amyloidosis observed by Bell (2) there were 5 instances in which no primary etiology could be established. Similar findings were reported by Dixon in 3 of 100 cases also (3). An incidental finding is "*necrotizing papillitis*" of one kidney. This is undoubtedly an agonal lesion. The apex of the pyramid is infected and has shelled out in part. The uremia must be attributed to the amyloidosis (4) rather than the necrosis of the renal papilla because it is of long standing. There is marked secondary hyperplasia of the parathyroids.

A finding of some interest is the presence of some droplets of lipid in the lumen of renal tubules. Although this was not described clinically in the present instance, this is an observation that has at times been described as useful in the diagnosis of the nephrotic syndrome of intercapillary glomerulosclerosis (5).

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PATIENT E. L.

First Admission 8/23/50—9/21/50 This 23-year-old white female entered Bellevue Hospital for the first time on 8/23/50 complaining of a lump in her abdomen.

She apparently had been enjoying good health until 3 months p.t.a. (prior to admission), when she first noticed a hard lump in her R.U.Q. Since then she had noticed a slow but progressive increase in the size of this mass, and a weight loss of 10 pounds despite a good appetite and a fair food intake. Concomitantly she noted a dull, low-grade, aching pain in the R.U.Q. which radiated around to the back, and was accentuated by sharp movements of the trunk. General malaise, lassitude and easy fatigability appeared during this period and her urine became darker. She had noticed no jaundice or clay-colored stools, but did experience nausea and vomiting (yellow-green fluid) occasionally.

Three days p.t.a she developed a non-bloody, non-tarry, watery diarrhea.

She denied using alcohol or any drugs, and had no known contact with chemicals, or poisons; she had neither given nor received blood, and had no injections, or contact with rats. She had never been outside the U.S.A.

Physical Examination The patient was a well-developed, thin, young, white female who appeared to be in no acute distress. The sclerae were questionably icteric. The liver was very large, extending down to the iliac crest; it was smooth, hard and exquisitely tender. The spleen was questionably palpable. No ascites, hemorrhoids or venous distention.

Course in the Hospital On bed rest, vitamins and a high-protein, high-carbohydrate diet, the patient did very well. By the time she was discharged on 9/21/50, the liver edge was only about 3 f.b. below the R.C.M. and no longer tender. She had been afebrile throughout her course and a liver biopsy had been performed. Cholecystography did not reveal the gallbladder.

Second Admission 7/19/51—10/21/51 The patient neglected to go to the clinic after her discharge and was re-admitted on 7/19/51 with a story very similar to that which she gave on her first admission. She felt quite all right after being discharged until 4 months p.t.a., when she again noticed that the liver was becoming progressively enlarged and tender. She found herself vomiting almost every morning during this time, and had anorexia and alternating diarrhea and constipation; no clay-colored, tarry or bloody stools, and no dark urine or icterus. There had been progressive dyspnea associated with the increase in liver size, but no orthopnea or edema.

Physical Examination T. 99.6 R. 20 P. 80 B.P. 120/70 The patient was a thin, well-developed, young, white female who appeared chronically ill; she was not dyspneic. Her sclerae and skin were moderately icteric and there was evidence of venous distention on the abdomen along with "spider" angiomata. EENT—negative. Lungs—clear to percussion and auscultation. Heart was not enlarged; R.S.R., heart sounds good; a harsh blowing systolic murmur was heard over the entire precordium, loudest over the pulmonic area. The liver was hard, smooth and tender and the edge was felt 8 f.b. below the RCM. The abdomen was protuberant, but no definite ascites was thought to be present. No other masses or spleen were palpated. There were no hemorrhoids. The remainder of the physical examination was essentially negative.

Course in the Hospital As on her previous admission, the patient responded well to bed-rest, vitamins, high-protein,

Laboratory Data

Urines

Date	Color	S.G.	pH.	Alb.	Sug.	Ac.	Bile.	Urobil.	WBC	RBC
8/23/50	amber	1.025	7.5	tr.	0	0	pos.	pos. 1:80	occ.	rare
8/28/50	yellow	1.014	7.5	tr.	0				1-3	0
9/6/50	yellow	1.027	4.5	2+	0		0	pos. 1:10	mod.	1-3
7/20/51	brown	QNS	6.5	tr.	2+	2+	pos.	pos. 1:20	many	
7/21/51	brown	1.018	7.5	tr.	2+	0			2-3	
7/25/51 (cath.)	brown	1.013	6.0	tr.	tr.	+	pos.	pos. 1:10	2-3	
7/27/51							pos.	pos. 1:60		
8/15/51							neg.	normal		
8/21/51	yellow	1.020	6.0	1+	1+	0	0	pos. 1:10		
10/7/51	dk. yel.	1.032	Ac.	0	0	0	3+			

Urines (continued)

Date	Other
8/23/50	
8/28/50	
9/6/50	
7/20/51	
7/21/51	hyaline & gran. casts
7/25/51	
7/27/51	
8/15/51	
8/21/51	occ. gran. casts.
10/7/51	

	B.S.P	2mg/Kg.		Glucose Tolerance Test				
	30 mins.	45 mins.	Fast.	½ hr.	1 hr.	2 hr.	3 hr.	4 hr.	5 hr.
1st adm.	100% ret.	80% ret.	66		124	71	48	79	122
2nd adm.		80% ret.	76	201	223	162	133	118	86

Blood Counts

Date	Hgb.	RBC	WBC	Tr.	P.	L	M	E	B	ESR	Hct.
8/23/50	11.0	3.30	9,050	1	70	24	2	2	1	59	
8/28/50										70	
9/13/50	11.5		11,050		66	27	1	5	1		
7/19/51	9.0	3.0	7,000	2	72	21	3	1	1	56	
8/15/51	7.5	2.7	7,000								37.
8/28/51	6.5	2.54	5,300	1	53	42		2	2	96	
9/26/51	6.0	2.65									24
10/8/51	12.0	(after transfusions)									37
10/14/51	9.5										30
10/16/51	11.5										
10/18/51	13.5	12.8								41	
10/19/51	13.0										39
10/20/51	13.5										40.2

Laboratory Data (continued)

Blood Chemistries

Date	Sug.	NPN	A/G	Chol. Esters	I.I.	C.F.T.	Alk. Phosph.	Proth. Time Pt.	Proth. Time Cont.
8/28/50		26	3.3/2.4	190/133	12	pos.	25.1	16	14
9/6/50			3.8/3.4	138/50	10	str. pos.	8.4	17	15
9/11/50				147/103					
7/20/51		30	4.5/2.0	210-Cent. Lab.	42	str. pos.	10.4	16	13
7/28/51	103		3.1/2.3	155/81	42	str. pos.	9.2		
8/15/51			3.5/4.1	151/96	30	str. pos.	7.4		
9/12/51			4.5/3.6	155/102	12	str. pos.	3.9		
10/3/51			3.3/4.6	182/71	12	str. pos.	1.5	21	7
10/8/51			3.35/2.45	136/78				28	7

Blood Chemistries (continued)

Date	Thym. Turb.	Cl.	K	Na	Ser. Bil.
8/28/50	1.5				
7/30/51		114	4	134	
10/10/51					2.76

Serology negative on both admissions.
Stool negative for occult blood on both admissions except after hematemesis. Always negative for ova and parasites.
Blood Cultures All negative.
Liver Biopsies Done on both admissions.
7/27/51 Heterophile agglutination negative.
X-Rays
9/6/50: Cholecystography does not reveal the gallbladder.
9/7/50: Barium enema-negative.
9/14/50: G.I. Series-negative.
7/24/51: No infiltration or consolidation of either lung.
7/27/51: The esophagus is normal.
8/1/51: No infiltration, consolidation or pleural effusion of either lung.
8/7/51: Cholecystography reveals non-functioning gallbladder.
10/16/51: 60% collapse of right lung with pneumothorax.
10/18/51: Lung re-expanded after bronchoscopy although there is still some haziness of the right lung field.
10/20/51: Pleural effusion—right base. Pleural thickening and pneumonitis right lower lobe.
E.K.G.: 7/31/51: Essentially normal.

high carbohydrate diet. The liver gradually decreased in size and became less tender. On 8/3/51 the spleen was felt for the first time, one f.b. below the LCM. She continued to run a low-grade fever which continued throughout her course, only on one occasion going above 101°. On 8/10/51 she began to show signs of ascites and was started on daily Mercuhydrin and crude liver extract. By 8/14/51 she had diuresed 7 lbs. and her ascites disappeared. The liver continued to decrease in size, and the spleen remained palpable. She developed "spider" angiomata on the face and began to reaccumulate ascitic fluid; Mercuhydrin was restarted. The patient began to feel much better about this time and ate very well. The liver was felt to be only 4 f.b. below the RCM on 9/8/51, but again very tender; spleen was felt 2 f.b. below the L.C.M. and ascites had again developed. On 10/5/51 she vomited about 50 cc. of bright red blood with clots. A Blakemore tube was passed, the patient heavily sedated, and blood transfusions given. Her

B.P. remained normal, but the pulse rate increased to 112. She responded very well to emergency treatment, and, on 10/7/51, was transferred to Surgery with a B.P. of 140/85 and a pulse rate of 90. On 10/11/51 she had another bout of hematemesis, and again on 10/14/51. She lost about 2800 cc. of blood in all and, again, was treated with sedation, whole blood transfusions and Blakemore tube. On 10/16/51 she was operated on and a portacaval shunt, end to side, performed. On 10/17/51 500 cc. of fresh blood was aspirated through gastric suction. The bleeding was controlled with pressure balloons. She also developed a post-operative atelectasis of the right lung which required bronchoscopy: a mucous plug was aspirated with resulting complete re-expansion of the lung. She developed a right pleural effusion and on 10/19/51, 700 cc. of serosanginous fluid and about 500 cc. of air were withdrawn on chest tap. The patient continued to bleed sporadically and, in spite of replacement by blood transfusions, the battle was a losing one. In an 11 hour period on 10/21/51 she vomited 1800 cc. of fresh blood and expired.

Case presented from the wards of the Fourth Medical Division, Bellevue Hospital, Dr. Charles Wilkinson, Dir.

Write your own clinical impression or formulation here, if you wish.

Pathological Findings

The serial biopsies failed to reveal evidence of infectious hepatitis.

9/2/50: Fibrosis of liver.
7/30/51: Fatty liver with early fibrosis.
10/9/51: Cirrhosis of liver.

The final diagnosis is *portal cirrhosis of the liver;* despite the unusual clinical features of the case (the youthfulness of the patient, absence of a history of malnutrition, or chronic alcoholism), the lesion does not have morphological characteristics that let it be distinguished from the usual Laennec's cirrhosis. The portacaval anastomosis was frustrated by a thrombus that formed in the portal vein proximal to the anastomosis. This is considered an infrequent, immediate complication of the surgical procedure by Blakemore (1); apparently the shunt may become obstructed at some later time in individuals surviving the operation.

An isolated esophageal varix was demonstrated at necropsy; there was only a mild degree of inflammation in its vicinity, nevertheless, the vein was eroded and hemorrhage took place from it. Massive quantities of "currant jelly" blood clot were present in the stomach and duodenum. Although there were microscopic changes of chronic passive congestion of the spleen, it was not enlarged. It is recognized that diminution in its size may occur through agonal expulsion of blood, or through a progressive "cyanotic atrophy" in the face of protracted portal hypertension in congrestive heart failure. It is not clear why in some individuals with portal hypertension, there is enormous splenomegaly; in others, the esophageal veins particularly bear the brunt of the hypertension. The discrepancy is suffi-

cient for some observers to question the role of the hypertension in the development of congestive splenomegaly (2) and of the esophageal varices (3).

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You Can't Escape Tension But You Can Minimize It

Today's living makes tension unavoidable—but you can learn how to deal with it.

Yet it is usually possible to prevent tension or to immunize oneself so as to cope with troubles with minimum discomfort, Dr. Fetterman wrote in a recent *Today's Health* magazine, published by the A.M.A.

Because prevention of tension is not always feasible and there are situations one cannot escape, a person is compelled to find means of relaxation. The roads to relaxation are many and each person should select those which are suitable to his makeup, physique, interest and opportunity, according to Dr. Fetterman. Ways to relax include:

1. Muscular ease—The physical comfort of muscular ease can initiate a temporary feeling of well-being. Complete physical and mental rest is the first road to relaxation.

2. Water treatment—Mankind loves the water and can find relaxation, rest and refreshment from it.

3. Exercise—Physical activity, whether work or play and sometimes of a strenuous degree, may alone provide escape from tension.

4. Hobbies—As it is not always possible for a person to participate actively in exercise or hard physical work, hobbies offer a wide variety of ways to relax.

5. Entertainment—When conditions of health and climate preclude active participation, entertainment such as that provided by movies, television, concerts or the theater relieve tension.

6. A change of scenery—It is often advisable to get physically away from the annoyances of everyday living, the routine and the harshness that surround one, the demands of the family, the jangling of the telephone, and the ever-recurring problems.

7. Reading and music—For most people, reading and music are inviting pathways to relaxation and are relatively inexpensive of time and energy.

8. Fraternization — The tenseness one feels when alone may vanish when he or she participates in a group.

9. Chemical aids—When efforts of relaxation fail, a physician may prescribe a sedative to be taken at the necessary time.

10. Psychologic aids — In certain instances relaxation cannot be achieved by physical measures alone and will require psychological techniques.

11. Professional assistance — When the degree of tension and its persistence are beyond self-help, it becomes necessary to rely on the assistance of those professionally trained and experienced.

12. Psychiatric help—When the tension arises from causes not easily relieved by the family physician, specialized psychiatric care is in order.

Fractures of the Nose

The nose is the most prominent feature of the face. Because of this fact and the fragility of the supporting bones, the nose is frequently fractured, by blows to and falls upon the face. Not only is a deformity of the external nose disfiguring, but a deformity of the septum is even less desirable because of the likelihood of obstruction of the airway with resultant interference with breathing.

Due to the excellent blood supply to the nose, nasal fractures become fixed quite promptly, and their reduction cannot be easily carried out after more than seventy-two hours have elapsed from the time of injury. Deformities resulting from failure to reduce nasal fractures early require extensive secondary procedures. Hence it is evident that early reduction is of the utmost importance.

Anatomy The external nose is partly bony and partly cartilaginous (Figure 1). The upper part or bridge is composed of the narrow rectangular nasal bones, which meet in the midline, join the nasal margin of the frontal bone superiorly, and articulate with the nasal processes of the superior maxillae (the base of the osseous bridge) laterally. The prominent lower half or two thirds of the nose is composed of the symmetrical upper lateral cartilages, inferior to which are the inverted V-shaped lower lateral (alar) cartilages, the lateral crura of which support the alae, and the medial crura of which support the tip and columella. A sagittal section (Figure 2) reveals the septum (which bisects the nasal cavity) to be formed of an upper bony plate (the perpendicular plate of the ethmoid), a lower bony plate (the vomer), and a large quadrilateral septal cartilage, which influences the profile in the region just above the tip. The inferior border of the septal cartilage is fitted into the vomerian groove, where it is held by strong adhesions between its perichondrium and the periosteum of the vomer. The flexibility of the cartilaginous tip is a defense against moderate injury.

Etiology Not all trauma to the nose results in fracture, and not all fractures result in deformity either of the external nose or the septum. Severe injury, however, may cause deformity, the nature of which is dependent upon the direction of the force applied. *Lateral trauma* produces fracture of the nasal processes of the superior maxillae (one displaced laterally, the other medially), causing displacement of the nose to the side (Figure 3). The septal cartilage may be dislocated out of the vomerian groove or bent into an S-shape, with resultant obstruction of the airway. *Anterior force* may comminute the nasal bones and displace them posteriorly en masse (flat nose) (Figure 4). The nasal processes of the superior maxillae may be fractured along their articulations with the nasal bones and become rotated outward (bursting force). The nasal septum may sustain fracture of the perpendicular plate of the ethmoid, or greenstick fracture, or dislocation, of the septal cartilage. The tip cartilages may be dislocated or fractured. The cribiform plate of the ethmoid may also be fractured. *Force from below* produces displacements

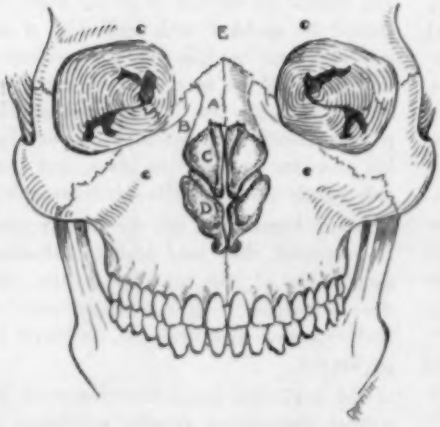
similar to those resulting from anterior force.

Pathology In addition to the bony and cartilaginous injury discussed above, there is contusion of the soft tissues, and because of the vascularity of the nose, hematomas are common. The delicate nasal mucosa is easily torn, making the fracture an open (compound) one, and leading to bleeding from the nostril.

Diagnosis The diagnosis of fracture of the nose is not always easy because of early marked swelling which may obscure the pathognomonic deformity. Crepitus may be detected occasionally. Tenderness is prsent over the entire nose. Bleeding from the nostril is suggestive, but not definitely diagnostic of fracture. It is important to examine not only the external nose, but also the septum and the airway. A cerebrospinal fluid leak is indicative of a fracture of the cribiform plate of the ethmoid. The possibility of a coexisting fracture of other facial bones or of the skull must always be considered. X-ray examination is usually of little help in the diagnosis of nasal fractures, but is, of course, useful in the detection of other facial and skull fractures.

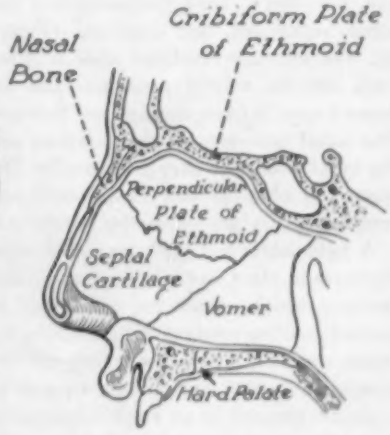
Treatment The obvious aim of treatment of nasal fractures is early reduction with restoration of normal facial contour and re-establishment of the airway. Simple fractures can be treated in the office; complex ones are best treated in the hospital. Anesthesia is important for the comfort and cooperation of the patient. General anesthesia is best for children, but combined local and topical anesthesia is ideal for adults. / The nostrils are first sprayed with a half-and-half mixture of Cocaine 10% and Epinephrine 1:1000, and then lightly packed with cotton "pencils" saturated with the same solution. Three pencils are inserted into each nostril (Figure 5): one posteriorly, superiorly, and laterally (to anesthetize the sphenopalatine ganglion), one superiorly (anterior ethmoidal nerve), and one on the nasal floor (filaments from the anterior

Fig. 1



Framework of the nose; **A.** nasal bone, **B.** nasal process of the superior maxilla, **C.** upper lateral cartilage, **D.** lower lateral (Alar) cartilage, **E.** frontal bone.

Fig. 2

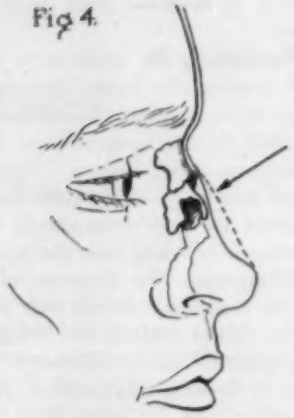


The nasal septum (sagittal section).

Fig. 3

Fracture and lateral displacement of naso-maxillary articulations and nasal processes of the maxilla. Note the septal cartilage dislocated out of vomerian groove (arrow).

Fig. 4



Depressed fracture of the nasal bridge with "flat nose" deformity.

palatine nerve). The external soft tissues may be anesthetized if necessary with 1% Procaine injected along the bases of the nasal processes.

A Walsham or Asch forceps may be used for the reduction, but usually a closed blunt-nosed curved Kelly clamp suffices. The instrument is inserted into the nostril and the several bony fragments are elevated, segregated, and disjoined (Figure 6). The laterally displaced nose is lifted back into its normal position. The depressed nose is lifted upward and forward. The nasal processes of the maxillae and the nasal bones are shaped manually. The septum is elevated and straightened and returned to its groove in the vomer.

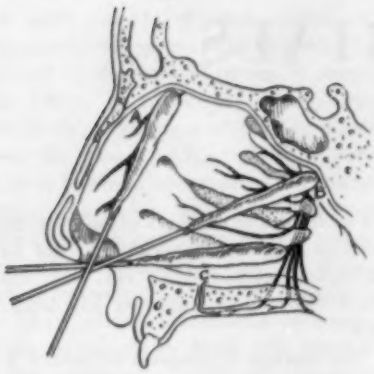
A light intranasal pack may hold some fractures in place, but a badly comminuted fracture which cannot be maintained in normal position requires suspension by external traction apparatus (such as the Kazanjian splint) and is best treated by a plastic surgeon or an otorhinolaryngologist. If a pack is used, is should not be left in place for more than forty-eight hours. A nose should not be packed in the presence of cerebrospinal fluid drainage; one should wait a minimum of ten days after the drainage ceases before packing such a nose. During that time the patient should be kept at rest and given antibiotics prophylactically.

An external spint is advisable to maintain the shape of the nose after reduction (Figure 7). This may be of copper or other malleable metal or dental compound, and should be molded to fit the nose. It should be padded with moleskin or an eye pad, and held in place by adhesive taping across the face, with enough pressure to maintain the desired position. The patient should be cautioned not to blow his nose for at least ten days, and then only lightly (both nostrils simultaneously).

Septal hematomas are fortunately rare. If untreated, they may lead to infection, destruction of the septal cartilage, and dense scarring. Treatment consists of early incision and drainage, followed by packing.

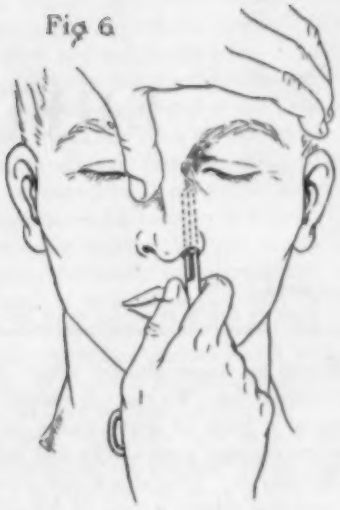
Old neglected nasal fractures with resultant deformities require admission to the hospital for plastic surgical management.

Fig 5



Anesthesia of nose with cotton pencils (see text). **A.** anterior ethmoidal nerve **B.** sphenopalatine ganglion. **C.** anterior palatine nerve.

Fig 6



Reduction of nasal fracture, using padded Kelly clamp for elevation, and thumb for molding.

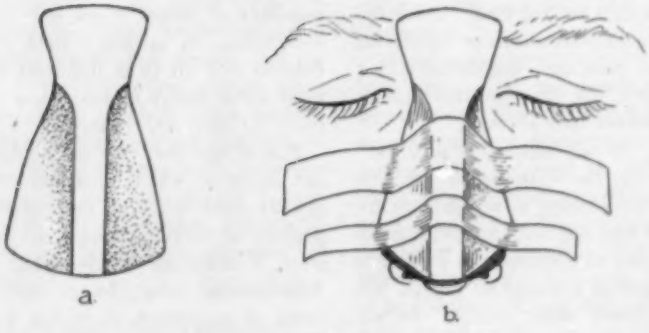


Fig 7

External splint for nose.

EDITORIALS

Progress

"It would be happier for a race to be free and diseased rather than healthy and enslaved."

We do not know who the writer of the above lines was. We recently encountered them in a book of Berry Hart's, at one time an eminent gynecologist and teacher of Edinburgh. They struck our attention at once and started a train of thought.

There is an implication in the quotation that freedom entails disease and that health connotes slavery. If this is true what hope has humanity?

Because love is bind—and free, people marry with little or no thought concerning heredity. Were they to follow the rules of Galton, the great student of eugenics, perhaps the race would be better, considered from certain points of view, but certainly it would be less free. There are those who would institute more legislation in respect to marriage—legislation along scientific lines, for uncontrolled nature takes few defects into account.

But what do we mean by progress? School A holds the vaunting of progress as a vain thing, so long as our prisons are overcrowded and our state hospitals overflowing, so long as discontented poverty is embattled against entrenched wealth, not to mention many other counts. In the case of School B we find what purports to be a totally different view of progress; in recounting the facts indicating progress under the administration of a distinguished prelate an official spokesman stated that "in addition the numbers of reformatories, asylums and homes under his care have multiplied exceedingly. He may fairly claim that his organization has held its own."

The concept of progress of School A is clearly not the progress of School B. School A can not think of an advanced, that is, a free race, as being diseased, while School B is seemingly content to accept an unhealthy society as a progressive one. There is much confusion here, as everywhere in present human thought and action. And why? Perhaps Pascal gives the answer when he says: "On what shall man found the economy of the world which he would fain govern? If on the caprice of each man, all is confusion. If on justice, man is ignorant of it." The members of School A are only capricious —righteous in spasms. Both A and B Schools and all their followers know not what social justice means. How, then, can there be any real progress?

Pascal said that "we see neither justice nor injustice which does not change its quality upon changing its climate. Three degrees of latitude reverse all jurisprudence, a meridian decides what is truth, fundamental laws change after a few years of possession, right has its epochs. That is droll justice which is bounded by a stream! Truth on this side of the Pyrenees, error on that."

Perhaps we are capricious in assuming that there can be no progress without jus-

tice. Moreover, we have not even defined what progress is. We leave the problem with the reader.

The Whole Truth

A small amount of ethyl alcohol, approximately two ounces, may be completely oxidized by the average person in twenty-four hours, if taken in divided doses (Macleod). Symptoms of toxicity appear when the blood contains 0.1 per cent; death is likely to occur when the concentration increases to 0.5 per cent (Meakins). It has been proved experimentally with animals that a slightly higher concentration than is present in the blood of the unconscious intoxicated person will result in death; the condition of the unconscious alcoholic approaches actual death (Seymour).

The old-fashioned temperance propaganda was based upon an objective presentation of damaged organs—stomachs, livers, kidneys, nervous systems—to drink-sodden audiences. It was ineffective. All this tissue injury seemingly stopped far short of death and every tippler thought that he was not toying too perilously with the fatal reaper.

It is a question whether a new type of education would be more effective, a propaganda that would tell the whole truth.

In telling the whole truth the therapeutic value of alcohol should not be slighted; we have left that strange era a long way behind us when it was proper, even in the highest medical quarters, to denounce alcohol as completely valueless therapeutically; that was during a brief period when the profession regrettably succumbed to the political pressure of Prohibition.

Food Plenty and Food Scarcity

According to the Food and Agriculture Organization of the United Nations, the gap between the world's few well-fed and the many hungry (70 per cent) threatens to widen. Yet surplus stocks (promoted by governments) of unsold food are mounting in the well-fed regions of the world which are not distributed to meet needs elsewhere. The well-fed produce more than they can eat themselves.

It is obvious that good health and full vigor cannot be sustained in such circumstances, which run on a chronic basis. It is not so obvious that worsening of the same circumstances promotes economic depressions, which however is a fact.

The same nations that are poorly fed are poverty-stricken and cannot buy the surpluses of well-fed ones. The United States Government had bought at the end of 1953 six billion dollars worth of surpluses. But that is not the answer to the plight of farmers and the starving of the world alike. Upon the right answer much depends as regards the total defeat of the Muscovite menace; in such a defeat we must have complete faith.

The Conservation of Human Resources

According to Ginsberg and Bray *(The Uneducated,* New York, Columbia University Press), it is only recently that, as a people, we have been concerned with our human resources; with pigs, hens and squashes, yes; but low-grade men and women still abound, as gauged by illiteracy.

Moral and humane considerations have been aroused by the conditions revealed by our wars. "During World War II more than five million people liable for military service were rejected as unsuitable because of a physical, emotional, mental or moral disability. Many young men could not serve their country during a major war. In the year following the outbreak of hostilities in Korea about 500,000 of the million and a half men examined were rejected. During World War II, 716,000 men were rejected on the grounds that they were mentally deficient."

In 1950, there were about 2.5 million illiterates, or about one in fifty. So there

is still an educational job to be done, for illiteracy seems to be an index of our social pathology in general.

The somewhat appalling data quoted can be considerably discounted if we bear in mind that American Draft requirements are by far the highest in the world. We rejected men for such disabilities as deviated septum, fallen arches, bad toes, bad teeth and many minor items. Many of our greatest athletes (wrestlers, fighters, baseball players, etc.) received draft deferments, yet were able to continue their regular hazardous activities.

Microfilm Not Recommended For Heart Disease Detection

Because of its low degree of detection, microfilm is not recommended for use in large surveys for finding persons with heart disease, according to Dr. R. V. Slattery, Oakland, Calif.

"It does not seem that the chest microfilm should be recommended for use in large surveys for heart disease since it is capable of detecting less than one-half of the cardiac abnormalities," Dr. Slattery wrote in a recent *Journal of the American Medical Association*. "The time and expense involved in such surveys could hardly be justified in a test that has such a limited degree of detection."

Dr. Slattery based his conclusions on the results of a clinical and microfilm study of 682 patients admitted to the medical and surgical outpatient departments of the University of Chicago.

Histories of those patients found to have clinical evidence of heart disease were further studied to determine which of them had a history of heart disease and which had symptoms that were compatible with heart disease at the time of examination, he stated. The incidence of heart disease, as determined from the clinical examination, was then compared with the incidence of abnormal cardiac silhouettes on the microfilms.

"Of the 682 patients, 56 had clinical evidence of heart disease," Dr. Slattery pointed out. "Twenty-five, or approximately 45 per cent, of the patients with clinical evidence of heart disease were detected on microfilm.

"In the series reported here, 90 per cent of the patients with abnormal hearts had symptoms frequently associated with heart disease, whereas only 45 per cent had abnormal cardiac silhouettes on the small roentgenograms. This would indicate that, in making surveys for heart disease, more persons with abnormal hearts would be found if all those with these symptoms, rather than only those found to have cardiac abnormalities on the microfilms, were subjected to a clinical investigation. Further study would be necessary, however, to determine whether surveys of this type would be practical.

"These findings make doubtful the value of trying to detect cardiac abnormalities on the microfilms of patients being admitted to a clinic or hospital when they will give a complete history as part of their investigation."

PEDIATRICS

JOHN T. BARRETT, M.D.*

The Use of Bal in the Treatment of Acute Encephalopathy

G. E. Deane and associates *(Journal of Pediatrics,* 42.409, April 1953) report 54 cases of acute lead encephalopathy in children, ranging in age from fifteen to eighty-four months. In 44 of these cases there was a definite history of eating lead paint or plaster; no history of the ingestion or the inhalation of lead was obtained in the other cases in the series. The blood lead level was determined in all these patients and was found to range from 0.08 to 0.73 mg. per 100 cc., with an average of 0.25 mg. The symptoms in these cases included convulsions, vomiting, abnormal reflexes and other abnormal neurological signs. In 38 of these cases treated in 1931 to 1948, the treatment consisted in the administration of calcium as lactate, gluconate or chloride, by mouth and parenterally, increased vitamin D and phosphorus intake and sodium citrate. After 1948, BAL was used in the treatment of 16 patients; BAL was used in a 10 per cent solution in benzyl benzoate and oil, and given in a dosage of 3 mg. per kg. body weight every four hours for ten days. Calcium and vitamin D were not given. Sodium citrate was given by mouth; sulfadiazine was also given orally to combat or prevent infection, as infection has been found to be "a frequent precipitating cause" of acute lead encephalopathy. Other supportive measures used in both series of cases included intravenous magnesium sulfate and barbiturates, as indicated, and the maintenance of fluid balance. Of the 38 patients treated before 1948, 10 died, a mortality rate of 26.31 per cent. Of the 16 patients treated with BAL, one died, a mortality rate of 6.25 per cent. Patients dying within twelve hours after admission are omitted from both groups. The results obtained in this series lead the authors to conclude that further trial of BAL in the treatment of acute lead encephalopathy is indicated. The importance of supportive measures, especially to prevent infection and acidosis, should not be overlooked.

Barrett

COMMENT

BAL definitely has a place in the treatment of acute and chronic lead poisoning. It is particularly beneficial in acute lead encephalopathy. Using this paper as a springboard, it might be well to discuss the use of a more recently used drug! Calcium Disodium Versenate given in doses of 1 gm./30 lbs/day in 2 divided doses given in a 5% glucose solution. More than 4 courses should not be given in a week. Results from this type of therapy have been most gratifying. Because this treatment does not affect lead bound to bone, the importance of avoiding acidosis and infection which liberates lead into the soft tissues must be emphasized. Evidently BAL is definitely able to mobilize lead from bone as well as soft tissues.

J. T. B.

Comparison of the Therapeutic Efficacy of Four Agents in Pertussis

R. G. Ames and associates *(Pediatrics,* 11:323, April 1953) report a study of therapeutic effect of streptomycin, chloramphenicol, human antipertussis serum

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and rabbit antipertussis serum in pertussis at the Babies and Willard Parker Hospitals, New York City. Treatment was begun within ten days after the onset of cough in only 30 per cent of the patients, and most of the patients had had the typical paroxysmal cough for fifteen days or longer. None of the agents tested resulted in prompt relief of the symptoms, but all of them had some favorable effect on the course of the disease; the best results in cases of ten days' duration or less were obtained with chloramphenicol. Rabbit antiserum and chloramphenicol were most effective in eliminating *H. pertussis* from nasopharyngeal cultures, but this did not result in prompt recovery, indicating that there was cellular damage to the mucous membrane which required time for healing and restoration of function after elimination of the infection. This emphasizes the importance of early treatment of pertussis. On the basis of ease of administration, low toxicity, and expense, chloramphenicol is considered to be at present "the agent of choice" in the treatment of pertussis. If chloramphenicol is given early in the disease, no other antibiotic is needed for the control of secondary invaders; but otherwise penicillin should also be given. In the treatment of pertussis, also, nursing care and the use of oxygen and suction, as indicated, are important.

COMMENT

Each agent evidently modifies the disease to some degree, but there is no clear-cut evidence that any are of a convincing therapeutic value. Chloramphenicol apparently is the agent which is of most benefit. Therapy is really effective only when instituted in the preparoxysmal phase of the disease. Penicillin given during the course of the disease cuts down on the secondary bacterial invaders. J. T. B.

A New Home Treatment for Early Cases of "Croup"

R. J. Mehr (*New York State Journal of Medicine*, 53:568, March 1, 1953) describes a plan of treatment for early cases of "croup" (acute laryngotracheobronchitis) when the child is first seen at home. This consists in an intramuscular injection of aqueous procaine penicillin combined with Benadryl, the average dose being 45,000 units of penicillin and 10 mg. Benadryl for children three to five years of age. Chloramphenicol is given by mouth or by rectal implantation of a capsule; the dosage used is 50 mg. per kg. body weight for the first twenty-four hours; then 25 mg. per kg. daily for two to three days; this is given in divided doses every six hours. In addition an expectorant cough mixture, containing an antihistamine, has been used; and steam may be used to humidify the air of the room. The author has had excellent results with this treatment, in the first 8 cases in which he has employed it. The laryngeal stridor is reduced promptly and "dramatically"; and its recurrence on subsequent nights is prevented; this is to be attributed to the use of the antihistamine, Benadryl, which also has a sedative action. As the infection in croup is "probably mixed bacterial and viral," the penicillin is given in a single large dose for its action early in the infection; then chloramphenicol is given, because of its wider spectrum, to carry on the antibiotic action. In 3 other cases of croup in children, treated more recently, Terramycin or aureomycin has been substituted for chloramphenicol in the same plan of treatment; results were as good as in the previous cases, and the change in antibiotic had no demonstrable effect.

COMMENT

This plan of treatment has merit. Any of the broad spectrum drugs may be used after the original dose of penicillin and Benadryl. Incidently, the original dosage of penicillin might well be increased tenfold. The supportive treatment of expectorants and antihistamines should be complemented with emetics if the "congestion" progresses and, of course, steam. J. T. B.

Parathion Poisoning in Children

J. M. Johnston (*Journal of Pediatrics*, 42:286, March 1953) reports 5 cases in

which children were exposed to contact with parathion by playing with discarded cans or sacks containing parathion in Wenatchee, Washington. Two of these patients were seriously poisoned, one fatally, while lesser degrees of poisoning occurred in the other 3 children. The toxicity of parathion and other organic phosphates, as also noted by Chamberlin and Cooke (see following abstract) is due to the destruction of cholinesterase enzymes of the central nervous system and other tissues and the accumulation of excess acetycholine in the nervous tissues. The earliest symptoms of poisoning are muscarinic, later nicotinic symptoms develop and symptoms of central nervous system dysfunction (acetylcholinic). The cholinesterase activity of the red blood cells and plasma can be determined; while a number of clinical laboratories are especially equipped to make the cholinesterase test (including a U. S. Public Health Service laboratory in Wenatchee), it can be done in any laboratory in an emergency. The author has found the test to be of special value in determining the severity of parathion poisoning in children exposed to it. The test was made in all but one of the 5 cases reported. The one case was the fatal case in which the history of exposure and severity of the symptoms established the diagnosis; and it was not possible to obtain blood for the test. In the treatment of patients showing symptoms of parathion poisoning all clothing should be removed and the skin thoroughly cleansed; if the history indicates that the patient has swallowed any of the poison, gastric lavage should be done. The administration of atropine is always indicated as this is the best available antidote, and patients with parathion poisoning can tolerate larger amounts of atropine than normal persons. If there is an accumulation of bronchial secretions, the use of a suction apparatus, or possibly a tracheotomy, is indicated; if respiratory symptoms are severe, the same method of treatment as that used in bulbar poliomyelitis may be employed. In the first and fatal case nasal suction for the removal of secretions was used, and artificial respiration and oxygen, without avail. In the other cases, none of these measures was necessary. In cases 2 and 3 a boy two and a half years old and his older sister were exposed to powdered parathion at the same time; the boy's chief symptoms were vomiting and tachycardia; cholinesterase activity was depressed; he responded well to atropine treatment. The sister showed no symptoms and the cholinesterase test showed no serious depression of cholinesterase activity; she was treated with atropine, however, and discharged from the hospital on the same day as her brother. In cases 4 and 5, two brothers were exposed at the same time; the younger brother developed severe symptoms of parathion poisoning and was promptly treated with atropine, which probably saved his life. The older brother showed no symptoms and no depression of Cholinesterase activity and did not require treatment. The exposure in his case was probably only very slight. The exposure in the cases reported is attributed to "the gross carelessness" of the parents, although they were aware of the poisonous nature of the substance.

Organic Phosphate Insecticide Poisoning

H. R. Chamberlin and R. E. Cooke (*A. M. A. American Journal of Diseases of Children*, 85:164, February 1953) report that of 51 cases of accidental poisoning in children admitted to the Grace-New Haven Community Hospital in 1951, there were 2 cases in which poisoning was due to an organic phosphate insecticide, parathion; one of these 2 patients died, the only fatality in this series of accidental poisonings. These 2 patients were brother and sister and it was found that the symptoms developed shortly after

an insecticide containing parathion had been used as a spray in the home. The parents were unable to read English and did not understand the "warning labels" on the aerosol cylinder containing the insecticide. Studies of the toxic action of organic phosphate compounds have shown that it is due to the anticholinesterase activity of these compounds; the symptoms of poisoning first noted are nausea, diaphoresis, excessive bronchial secretions, miosis and tenesmus; these are due to the muscarinic effect of acetylcholine; later nicotinic effects are noted, then central nervous symptoms such as ataxia, tremor and coma, as the acetylcholine concentration increases in the central nervous system. In the 2 cases reported by the authors, and in other cases of parathion poisoning reported in the literature —both fatal and non-fatal, the patients went into deep coma with areflexia. In the treatment of organic phosphate poisoning, large doses of atropine should be given frequently, and this treatment should be continued for several days; in the authors' case in which the child, an infant five months old, recovered, he was given 0.79 mg. of atropine in the first twenty-four hours and a total of 1.64 mg. in four and a half days. In addition to atropine, gastric lavage and thorough cleansing of the skin, to remove as much insecticide as possible, are indicated; and oxygen may be necessary. Restriction of the sale of organic phosphate insecticides is suggested in order to reduce the incidence of such cases of poisoning.

COMMENT

ORGANIC PHOSPHATE INSECTICIDE POISONING
H. R. Chamberlin and R. E. Cooke

PARATHION POISONING IN CHILDREN
J. M. Johnston

Editorial comment applies to both of the foregoing papers.

New reports of poisoning with this organic phosphate insecticide are appearing monthly. It would be well to point out that the complex of miosis, nausea, increased respiratory secretions, tenesmus, weakness, anoxia and possibly complete unconsciousness with areflexia should alert the physician to the likelihood of parathion poisoning. Atropine is not only a specific for this condition but, to be effective, must be given in respectable doses over some period of time. Suction, oxygen, artificial respiration may also be necessary.

J. T. B.

OBSTETRICS

HARVEY B. MATTHEWS, M.D., F.A.C.S.*

Review of Three Hundred Fifty-Three Cases of Premature Separation of the Placenta

G. F. Bieber *(American Journal of Obstetrics and Gynecology,* 65.257, Feb. 1953) reports 353 cases of premature separation of the placenta which occurred in the Charity Hospital of New Orleans in a ten-year period in 79,972 deliveries, an incidence of 1 in 226 deliveries. In this series of cases the premature separation of the placenta occurred somewhat more frequently in white than in Negro patients and much more frequently in multiparas than in primaparas. There was a total of 4 maternal deaths, a maternal mortality of 1.1 per cent; there were 149 stillbirths and 211 live births, 10 of the infants dying after delivery. The premature separation

Matthews

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of the placenta occurred when the patient was in labor in 294 cases; toxemia of pregnancy was the probable causative factor in 37.6 per cent of the 353 cases. Cesarean section was done in 15.8 per cent, in those cases in which the cervix was not dilating and labor was not progressing, especially in primiparas, and in cases of low parity with unsatisfactory progress of labor and severe symptoms. Low cesarean section has been preferred to the classical operation, especially in the second five-year period of this series. Vaginal delivery was preferred in multiparas with "ripeness" and dilatation of the cervix and labor in good progress, especially in cases of prematurity. Pitocin was used in some cases to "speed up" labor, being given by intravenous drip in the last five years, especially in cases of prematurity, where rapid delivery was essential.

COMMENT

Hemorrhage is the foremost cause of maternal mortality and premature separation of the placenta is a potent cause of obstetrical bleeding. It is one of the most serious accidents of pregnancy. Depending on the amount of separation of the placenta, there may be no fetal heart heard when first seen by the physician. Therefore morbidity and mortality both for mother and infant are high, particularly for the infant. In his review of 353 cases, the author's method of management and reasons for action are about what we think is "good and proper". We definitely prefer the low cervical cesarean section. Hysterectomy occasionally must be done in the presence of a non-contracting uterus, with uncontrolled bleeding. Do not forget these cases need lots of blood—quick. "Quick thinking and fast action" are required for the "real case" of premature separation of the placenta.

H. B. M.

Infectious Hepatitis in Pregnancy

L. G. Roth *(American Journal of Medical Sciences,* 225:139, Feb. 1953) reports 4 cases of infectious hepatitis complicating pregnancy observed by himself and reviews 10 other cases reported to him by colleagues, and 2 published reports. In his own cases, 2 patients had normal infants delivered at term; and in 2 cases the infant was stillborn, antepartum or intrapartum death being due to erythroblastosis fetalis. In the entire series of 16 cases there were 11 normal infants born at term, 2 spontaneous abortions and 3 stillbirths. Ingersley and Teilum, in Sweden, have recently reported 91 cases of infectious hepatitis complicating pregnancy; there was only one maternal death in this series, and no maternal death in the author's series. From this review the author concludes that the true incidence of infectious hepatitis in pregnancy is not known and will not be known until this disease is made reportable. Infectious hepatitis complicating pregnancy is not more severe than in the non-pregnant; spontaneous abortion or premature labor may occur as in any severe or prolonged febrile disease. There is no evidence that infectious hepatitis causes any fetal abnormalities or defects; and therefore the occurrence of this disease in a pregnant woman is not an indication for therapeutic abortion.

COMMENT

The occurrence of infectious hepatitis during pregnancy is very rare. In over 40 years of obstetrical practice your commentator has never seen a case—that is one in which this diagnosis was made. Dr. Roth concludes from this review that morbidity and mortality of infectious hepatitis during pregnancy are no different than in the non-pregnant. There is no evidence that the disease causes fetal abnormalities *per se.* Its occurrence does not call for therapeutic abortion. Like most other conditions complicating pregnancy, to treat the hepatitis and forget the pregnancy is good management.

H. B. M.

The Use of Continuous Intravenous Sodium Pentothal in the Treatment of Eclampsia

M. D. Goodfriend and associates *(New York State Journal of Medicine,* 52:2903, Dec. 1, 1952) report the use of continuous intravenous infusion of Sodium Pentothal in the treatment of eclampsia. Five cases are reported in which the intravenous infusion was continued for seventy-two hours; convulsions were controlled

without ill effect on either the mother or the infant. For this method of treatment, a freshly prepared solution of 0.25 to 0.3 per cent Sodium Pentothal is employed, in salt-free 5 per cent glucose in water. This solution is given at the rate of 20 drops per minute when a convulsion occurs. When the patient's blood pressure, respiration and pulse have become stabilized, the concentration of the Sodium Pentothal solution is decreased to 0.15 per cent changing the rate of flow; if the patient becomes restless, either the concentration of the solution, the rate of flow or both can be increased. When there is diuresis, the concentration of the solution is further decreased but the infusion is not discontinued until the patient can take fluids by mouth. By regulating the rate of flow, the amount of fluid intake is maintained by the infusion at approximately 1,500 cc. in twenty-four hours, the average amount necessary to replace the insensible water loss. The patient is under constant observation; the pulse, respiration and blood pressure are determined frequently and the patient's color noted. In this way, the treatment and the dosage used are individualized. Oxygen, laryngoscope, suction apparatus, endotracheal catheter and airway are always immediately available. It is also important that only a freshly prepared solution of Sodium Pentothal, not more than twenty-four hours old and "absolutely clear," should be employed for intravenous infusion.

COMMENT

Naturally no conclusions can be drawn from only 5 cases of eclampsia that were treated by the authors by the use of a continuous intravenous sodium pentothal. On the other hand, we can testify to the fact that sodium pentothal intravenously will control convulsions of eclampsia. The idea of a continuous intravenous drip is "good and handy" and we can see many associated benefits: complete control of the amount of sodium pentothal given; the quantity of fluid intake per 24 hours is known —approximately 1500 cc. in 24 hours—; and the patient is under constant observation, which makes it easy to tabulate all pertinent data. Individualization, which is so important for any method of treatment, can be carried out with the authors' technic better, it seems to us, than by most other methods. The question as to the amount of sodium ions poured into the blood stream and the possible deleterious effects upon the toxemia **per se** is something to think about. No ill effects have been reported. Try it.

H. B. M.

Preinvasive Carcinoma of the Cervix During Pregnancy

R. R. Greene and associates (*Surgery, Gynecology and Obstetrics*, 96:71, Jan. 1953) report 14 cases in which a biopsy showed preinvasive carcinoma of the cervix during pregnancy. These patients were all followed through pregnancy and the puerperium, and biopsies, with specimens obtained from four quadrants of the cervix, were made postpartum. In all but 2 cases, the diagnosis of carcinoma was confirmed by the postpartum biopsy. In one case a hysterectomy was done seven weeks postpartum and in another patient eleven weeks postpartum. Hysterectomy, or in some of the younger patients, core amputation of the cervix, was done four months or more postpartum in the other cases in which the postpartum biopsy showed carcinoma and the diagnosis of carcinoma was confirmed. In the cases of which core amputation was done examination of the specimens in serial blocks showed no extension of the carcinoma "lateral to or above the level of the amputation." Core amputation is not, however, recommended in general for treatment of preinvasive carcinoma of the cervix. On the basis of the findings in these cases, the authors are convinced that when biopsy shows evidence of preinvasive carcinoma of the cervix, such changes cannot be regarded as "evanescent pregnancy changes," but the patients must be followed up and postpartum biopsies made with the aid of trained technicians.

COMMENT

The diagnosis of preinvasion carcinoma (carcinoma in situ) of the cervix during pregnancy is very difficult. Even the "experts" do not

always agree. The average clinician therefore should never venture an opinion. Likewise the treatment of this lesion is not settled. About the only thing that is agreed upon is that such lesions must be watched closely no matter what type of treatment is employed. Your commentator agrees with the authors that when biopsy demonstrates preinvasive carcinoma of the cervix during pregnancy something should be done about it; and we must not simply regard such changes as "evanescent pregnancy changes". A personal "follow-up" with a well trained pathologist or technician is obligatory. These cases are for the "super-duper" specialist—and sometimes he does not know the answer.

H. B. M.

Premature Infant Mortality

R. H. West and associates (*American Journal of Obstetrics and Gynecology*, 64:1222, Dec. 1952) present a study of the mortality of premature infants at Evanston (Ill.) Hospital in 1941 through 1950, as compared with 1929 through 1938. In the later period the mortality rate of premature infants was 80 per cent of that in the earlier period, although the percentage of live births of prematures was the same. The premature infant mortality accounted for over half of all neonatal deaths in both series. In both series the premature mortality rate was "disproportionately high" in deliveries by cesarean section; but the type of vaginal delivery employed was not found to have any definite effect on the mortality rate. The maternal conditions requiring premature delivery by cesarean section undoubtedly affect the infant mortality rate in these cases unfavorably. While the use of analgesic drugs has been restricted in premature labors, no adverse effect of such drugs on premature mortality has been demonstrated; the use of anesthetics in delivery also has not been found to increase the mortality rate. In a study of these two series, no single factor has been demonstrated to be the cause of the decrease in the premature mortality. Many "obstetrical improvements," improvement in nursing care, and increased pediatric supervision in the neonatal period are "collectively" credited with the reduction in the premature mortality rate.

COMMENT

The problem of the premature infant has been constantly in the minds of both obstetricians and pediatricians for a long time. Morbidity and mortality rates are still relatively high but are improving, particularly if deaths due to congenital anomalies incompatible with life are eliminated. Larger babies naturally have a better chance of survival than smaller infants—under 1500 grams. The smaller the infants the higher the mortality rate. Birth injuries account for a large group of fatalities. Better than 50% (53.2 and 56.1 are recent figures) of prematures die within the first three days after birth. The authors very properly state that the improvement in premature infant mortality has been due to (1) better obstetrical care throughout pregnancy and labor; (2) better cooperation in the care of these babies between obstetricians and pediatricians beginning immediately after the birth; (3) improved nursing care and (4) better hospital facilities for the care of "premies". Keep these facts in mind and do your share to further reduce premature mortality. It can be done. It should be done. Who can tell which "premie" will turn out to be a famous man or woman?

H. B. M.

The Prevention of Eclampsia: An Australasian Experiment

Bernard Dawson (*Journal of Obstetrics and Gynaecology of the British Empire*, 60:80, Feb. 1953) reports a study of the incidence of eclampsia in pregnant women "booked" at the Department of Obstetrics of the University of Otago, New Zealand. The results reported show that the incidence of eclampsia is definitely reduced by adequate antenatal care with special attention to the early diagnosis and prompt treatment of toxemia of pregnancy. Most important is the careful observation of each patient's weight, as an excessive weight gain, especially in late pregnancy, is an important indication of beginning toxemia. Blood pressure must also be carefully controlled, and any increase in blood pressure studied in relation to the basal blood pressure of each patient. The presence of albumen in the urine is a late rather than an early

sign of toxemia, and control of the toxemia must be begun before it appears. When abnormal weight gain and increasing blood pressure indicate the beginning of toxemia, the patient is treated in the hospital. With treatment in this early stage results are good, and in some cases the woman may be allowed to return home to continue her pregnancy, but always under careful "almost daily" observation.

COMMENT

This "Australasian Experiment" proved exactly what we have known for a long time. Good prenatal care will practically eliminate eclampsia. The trouble we have had is to define and get carried out adequate prenatal care. What was said to be adequate for one clinic was entirely inadequate for another. Just so with individual doctors. Nowadays, certainly with us here in the States, adequate prenatal care is pretty generally understood and hence eclampsia is rarely encountered, except perhaps in the isolated rural areas. "Early treatment of early symptoms" makes for prevention of the severe toxemias of pregnancy, including eclampsia. Adequate prenatal care is the "key" to prevention.

H. B. M.

Viral Diseases in Pregnancy and Their Effect Upon the Embryo and Fetus

B. M. Kaye and associates *(American Journal of Obstetrics and Gynecology,* 65:109, Jan. 1953) in a study of the effect of virus diseases in the mother on the embryo or fetus in utero at Michael Reese Hospital, found only 6 cases in which a virus disease occurred during pregnancy; in 3 of these cases a normal infant was born; in one case (varicella in the sixteenth week of pregnancy) there was a spontaneous abortion six weeks later, in 2 cases the fetus was delivered at twenty-two weeks, in one case normally developed and in the other grossly malformed. In this last case, the mother had an attack of virus pneumonia early in pregnancy. In a review of the literature, 154 cases of virus disease, other than rubella, occurring early in pregnancy were found. The incidence of fetal anomalies in this series of cases was 21 per cent, while following rubella early in pregnancy, the incidence of fetal anomalies is 40 per cent. The occurrence of bleeding or threatened abortion was not found to increase the incidence of congenital abnormalities. The authors are of the opinion that "considering fetal abnormalities as a whole," virus diseases are only a small factor in their etiology, and further study of the problem of congenital anomalies is necessary.

COMMENT

The whole subject of viral disease occurring during pregnancy is in a state of uncertainty. Much has been written but little basic information has been produced. Rubella is perhaps best documented and yet exact knowledge of "how and why" German measles produces certain embryonic and/or fetal anomalies (blindness, certain heart defects, etc.) is still unknown. One fact seems well established and that is that rubella occurring early in pregnancy (1-3 months) is much more apt to produce anomalies in the conceptus than when occurring after the 4th month. During the last trimester no effect has been determined. In other words "if you must have rubella have it late in your pregnancy when your baby will not in all probability be effected". The authors found, in a review of the literature, that of 154 cases of virus disease, other than rubella, the incidence of fetal anomalies was 21%; while following rubella early in pregnancy it was 40%. Both these figures seem high. We feel that in a more intensive and differentiating study in a larger series of cases these figures would be considerably reduced. Remember that fetal anomalies in the "run of the mill" obstetrical practice run around 10-18%. The big question: how can you place the onus upon rubella or virus disease generally? Truly a difficult problem that is "crying" for solution. A wonderful problem for a research team of scientific individuals who are sincerely determined to ferret out the true facts. What a boon to the anxious mothers and fathers such a study would be! Talk it up!

H. B. M.

GYNECOLOGY

HARVEY B. MATTHEWS, M.D., F.A.C.S.*

The Treatment of Monilial Vaginitis with Caprylic Acid

W. J. Reich and associates *(American Journal of Obstetrics and Gynecology,* 65:180, Jan. 1953) describe a method of treatment employed in 124 cases of monilial vaginitis; these cases were found by laboratory cultures of 897 women with vaginal discharge. Caprylic acid was used in three forms: 20 per cent aqueous solution of the sodium caprylate; a combination of the sodium and zinc salts in powder form; and a vaginal cream containing 10 per cent sodium caprylate and 5 per cent zinc caprylate in a water-miscible base. In all cases office treatments were carried out twice a week and consisted in washing and cleansing the vagina with the solution, further diluted by mixing one part of the solution with three parts of water; application of the powder to the cervix and vaginal walls by insufflation; application of the vaginal cream with a vaginal applicator, followed by application to the labia and vulva. The patients were then instructed to use the diluted sodium caprolyte solution as a vaginal douche each night, beginning one day after the office visit, and then to apply the vaginal cream. The treatment was not interrupted because of menstruation. Of the 124 women treated by this method, 93 completed the five weeks treatment, including 17 pregnant women; 80 patients (86.2 per cent) were free of the organisms (three consecutive negative cultures) at the end of the five weeks' treatment; more than one-half of the patients (58 per cent) showed negative cultures at the end of a week's treatment. All of the 17 pregnant patients showed negative cultures, 12 at the end of the second week of treatment. All but 4 of the patients were relieved of pruritus and the vaginal discharge diminished after the first treatment. Previous antibiotic therapy within six months definitely increased the resistance to treatment; of the 13 patients who did not respond to the treatment, all but 3 had had such antibiotic therapy. Of the other 21 patients who gave a history of previous antibiotic therapy, only 4 showed negative cultures after one week of treatment, 11 requiring three to four weeks' treatment. This relationship between antibiotics and vaginal moniliasis warrants further investigation.

COMMENT

The multiplicity of agents used in the treatment of monilial vaginitis serves to illustrate their inadequacy. "Truly an unruly" vaginal infection and any remedy that can be demonstrated to be of value is welcome. According to the authors caprylic acid is such an agent. They report 86% of 93 proven cases of monilial vaginitis were cures with five weeks of therapy. This is certainly excellent. We have had no personal experience with the use of caprylic acid in such cases. Notwithstanding we certainly intend using it according to directions laid down in this paper. It sounds good. What a boon to the suffering women with monilial vaginitis! Try it. Antibiotics are no good.

H. B. M.

Evaluation of the Simultaneous Use of Cytology and Biopsy in the Diagnosis of Carcinoma of the Cervix

A. F. Daro and associates *(American Journal of Obstetrics and Gynecology,* 65: 364, Feb. 1953) report the use of the cytological smear and biopsy at the first

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examination of 500 women admitted to a gynecological out-patient clinic. The smear and biopsy study was made because of erosion or unhealthy appearance of the cervix, in 412 cases, because of a history suggestive of carcinoma plus an abnormal appearance of the cerivx in 71 cases, and on the basis of history alone in 17 cases. In every case the smear was taken before the biopsy and material was obtained from the entire circumference of the cervix and from the vagina. By the routine use of both methods, a diagnosis of carcinoma of the cervix was made in 43 of the 500 patients. There were only 2 false negatives in the smear cytology examination, and 4 false negatives in the biopsies; the false negatives of one test were found to be in Stage I; in 8 cases, the patients were young women (average age twenty-seven years) and there were no symptoms suggestive of carcinoma, yet carcinoma of the cervix in the early stage was found when the tests were used because of the presence of erosion of the cervix. On the basis of these findings the authors advocate the routine use of biopsy and cytological smear, or at least of one of these tests, in every case in which there is erosion or a "suspicious" appearance of the cervix. Since the cytological smear test is apparently the more sensitive, especially in early cases, and can be done easily, it can be used alone in such cases. It is believed that by such use of these tests, more carcinomas of the cervix will be found in an early stage.

COMMENT

Any diagnostic procedure that will aid in making an early diagnosis of cancer is of distinct value, particularly cancer of the cervix uteri. However, in recent years in our enthusiasm for new diagnostic procedures, some of us have gone "overboard" and have employed these procedures unnecessarily. For example, we do not think that the routine use of both cytological smear and biopsy of cervix is necessary at the first examination of every gynecological patient. We agree that such tests are perhaps desirable from a scientific pathological viewpoint but are not very practical in everyday practice. We certainly agree that "all known tests" should be performed in any case where there is the slightest indication of malignancy. On the other hand, we readily agree that the cytological test should be performed on all new cases and if "suspicion" is aroused biopsy (circular type) of the cervix or other vaginal areas performed. The "cytological smear" certainly has focused attention on early diagnosis of cancer generally and particularly on cancer of the female pelvis. It has been a great stimulant in creating a "cancer consciousness" in the minds of both physician and patient. The lay public will be educated as regards cancer; the physician should do the job.

H. B. M.

Pelvic Tuberculosis

M. L. Bobrow and J. A. Batts (*American Journal of Obstetrics and Gynecology*, 64:1242, Dec. 1952) report 45 cases of pelvic tuberculosis treated at the Harlem Hospital. These cases are classified as the ascitic type, which might better be called peritoneal tuberculosis, as the genital organs are but little involved; the tubal type; the uterine type (which is rare), and the advanced type with spread to all the pelvic organs. The advanced type may be in the quiescent or "attempted healing" stage or may be progressive. The ovary was involved in 40 per cent of the Harlem Hospital series. Diagnosis of pelvic tuberculosis is difficult and the true nature of the condition may not be suspected until the patient comes to operation; in making the diagnosis, finding the characteristic "doughy" abdomen is of importance; pelvic induration, often insensitive, and not corresponding to the temperature and sedimentation rate is also suggestive of tuberculosis; the fact that pelvic inflammatory disease does not respond to treatment with sulfonamides and/or antibiotics, also suggests the possibility of tuberculosis infection. Streptomycin has not yet been used in a sufficient number of cases of pelvic tuberculosis to determine its true value, but from their experience the authors are of the opinion that streptomycin and para-aminosalicylic acid are indicated in the ascitic, the tubal, and the uterine

types of pelvic tuberculosis. Streptomycin may be of aid in the treatment of the quiescent advanced type, but in the progressive advanced type, radical surgery—total hysterectomy with bilateral salpingo-oophorectomy — is "the treatment of choice." The immediate results of operation in these cases have been good; 7 patients with advanced progressive pelvic tuberculosis have been followed up, some for as long as five years after radical operation and have remained free from symptoms and able to work.

COMMENT

Pelvic tuberculosis like tuberculosis infection anywhere in the body is "bad business". From our experience, pelvic tuberculosis is oftentimes very difficult to diagnose. Sometimes the condition is not suspected until laparotomy is performed for some other pelvic lesion—commonly pelvic inflammatory disease. Occasionally the correct diagnosis is easily made. Of course history and the age of the patient are of paramount importance: always keep in mind that pelvic tuberculosis is most apt to occur in adolescent girls or young women, particularly when there is a history of family tuberculosis or other intimate contacts. However, we have seen more than one case of pelvic tuberculosis without antecedent tuberculosis history. More recently conservative treatment with streptomycin and/or PAS seems to offer hopeful therapy in certain types of the disease. General measures, e.g., rest, good food, fresh air, relaxation, etc. are in order just as in any type of chronic tuberculosis. For the progressive advanced types of pelvic tuberculosis pan-hysterectomy with bilateral salpingo-oophorectomy offers excellent results, particularly if there is no active lung tuberculosis. The authors are to be congratulated upon the "good and sensible" manner in which they have presented this subject. We agree wholeheartedly.

H. B. M.

The Use of the Roentgen Ray in the Diagnosis and Therapy of Faulty Ovulation

W. W. Williams (*American Journal of Roentgenology*, 69:88, Jan. 1953) reports a series of 412 cases in which a routine study of factors causing sterility was made, including pelvic x-rays, study of the condition of the cervix, endometrial biopsy and records of the basal body temperature. The x-ray studies are of value as showing uterine and ovarian abnormalities — genital hypoplasia, ovarian cysts, etc. But a special study was made of the "patterns" of basal body temperature, as these patterns reflect cyclic ovarian changes. On the basis of these observations, it was found that ovulation was essentially normal in 58.5 per cent of the 412 cases. Of the 171 cases in which there was evidence of abnormal ovulation, 116 showed bimodal basal temperature curves, but cyclic irregularities; in 55 cases, monomodal basal temperature curves were the rule, indicating that ovulation did not occur for long periods of time. In the group of cases with cyclic irregularities and evidence of irregular ovulation, 25 per cent conceived, but the highest percentage of conception (41 per cent) occurred in the group who were given roentgen therapy to the ovaries and the pituitary, according to the author's technique. Roentgen-ray therapy was given in 23 of the 55 anovulatory cases, and conception occurred in 16, or 69 per cent of this group while conception occurred in only 2 other cases in this anovulatory group. This indicates that roentgen-ray therapy is of special value in this particular group with monomodal basal temperature curves. Illustrative cases are reported. Roentgen-ray therapy is not of as definite value in cases in which ovulation is irregular, with abnormal biphasic temperature curves but some patients in this group respond to treatment, as noted above. In cases of ovarian cysts, in which the basal body temperature curve is often monomodal, roentgen therapy is not of value; resection of the cysts is indicated. In cases with monomodal body temperature curves associated with low basal metabolism rate, thyroid therapy is the treatment of choice.

COMMENT

We have very little accurate basic knowledge about the process of ovulation. We have quite a mass of information on the clinical phases of ovulation which helps enormously with therapy. The use of the Roentgen ray in faulty ovula-

tion illustrates this fact. Exposure of the ovaries and/or pituitary to the x-ray in proper dosage using the proper technic will initiate or regulate ovulation and thereby leads to conception in many cases.—41% in the author's 25 cases of sterility. We have had a limited experience over the years with this form of therapy but our results have not been too successful. This is "dangerous therapeutics" and must be undertaken only by those roentgenologists who have made a special study of this particular problem; and if a goodly amount of gynecological experience be added better results may be anticipated. This is no job for the "run of the mill" roentgenologist. The final result of these "exposures" is still under debate. Try every other form of treatment before resorting to the Roentgen ray for faulty ovulation.

H. B. M.

Radioactive Phosphorus (P^{32}) in Treatment of Menorrhagia

H. C. McLaren and associates (*British Medical Journal* 1:358, Feb. 14, 1953) report the treatment of menorrhagia with radioactive phosphorus (P^{32}) in 16 cases. A specially designed intra-uterine applicator was employed. In 11 patients, a period of three months elapsed between the treatment with P^{32} and hysterectomy; 7 of these patients were cured of their menorrhagia in that period; either cessation of bleeding or normal menstruation occurred; 2 patients showed improvement but relapsed; in 2 patients, the treatment was ineffective, owing to the presence of unsuspected fibroids. In the patients in whom hysterectomy was done within a shorter period after application of P^{32}, it was found that the radioactive phosphorus caused a surface burn, about 2 mm. deep, of the endometrium, but no damage to the ovaries. In those cases in which hysterectomy was done three months after application of radioactive phosphorus, it was found that the burn was healed with regeneration of the endometrium, but, as reported above, this did not result in a recurrence of the menorrhagia in all cases. Even if only temporary hemostasis is obtained with the use of P^{32} this might be of value in some cases, as in younger women who refuse radical operation, and when menstruation is reestablished in such cases, it may be normal. In women in the older age group normal menstruation may also be established after P^{32} therapy; but whether complete amenorrhea can be obtained in the menopause by this method without destruction of the ovaries has not been definitely established.

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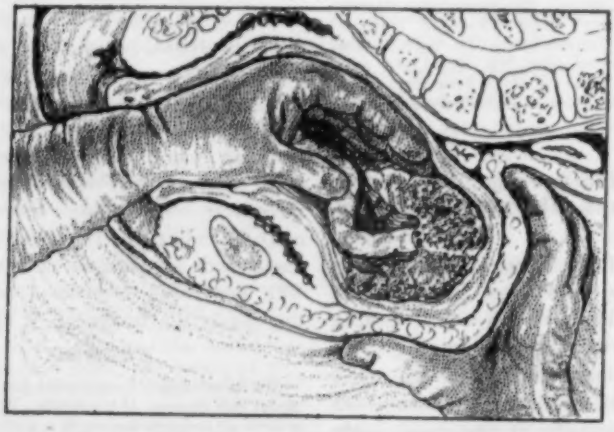

When Credé method is unsuccessful and especially if there is an alarming hemorrhage hand removal of the placenta is indicated.

Medical Book News

Edited by Robert W. Hillman, M.D.

Surgical Diagnosis

Physical Examination of the Surgical Patient. By J. Englebert Dunphy, M.D. & Thomas W. Botsford, M.D. Philadelphia, W. B. Saunders Co., [c. 1953]. 8vo. 326 pages, illustrated. Cloth, $7.50.

This simple and informal text of procedure and technique steers a middle course between the discussion of techniques and the discussion of disease so revealed. There is reemphasis of the simple fundamentals of medicine and surgery, which places this text among those that are valuable to the student and the surgeon.

The subject matter is capably divided between the elective examination and the emergency examination of the surgical patient. Regional anatomical approach and delineation is clear, concise, and complete in all the various phases of the surgical problem to be ascertained.

True stress is placed on the completeness of the surgical examination as well as the quality of the performance. To the practicing surgeon, as well as the student and the teacher this text can be recommended. The bibliography is rather short, but the appendix and index are excellent.

EARL W. DOUGLAS

Anatomy

Morris' Human Anatomy. A Complete Systematic Treatise. Edited by J. Parsons Schaeffer, M.D. With 15 contributors. 11th Edition. New York, Blakiston Company, [c. 1953]. 4to. 1,718 pages, illustrated. Cloth, $16.00.

The eleventh edition of Morris's *Anatomy*, which is a complete systematic treatise, has fifteen contributors under the capable editorship of Dr. Schaeffer. It has been improved with new contributions on the Digestive System, Urogenital System, the Musculature, Osteology, and the Articulations. There has been extensive rewriting of many of the sections of this edition which has clarified and added to its value as a text. There are clinical aspects and relations at appropriate locations throughout the text. Many illustrations have been replaced with new ones and additional new illustrations are included as well as a number of roentgenograms.

This remains an excellent text and the revisions have been towards clarity and completeness of anatomical detail.

EARL W. DOUGLAS

BOOKS RECEIVED FOR REVIEW

Managing Your Coronary. By William A. Brams, M.D. Illustrations by Hertha Furth. Philadelphia, J. B. Lippincott Co., [c. The Author, 1953]. 8vo. 158 pages, illustrated. Cloth, $2.95.

Arterioesclerosis. Estudio Clinico Experimental. By Dr. Jose Froimovich. Valparaiso, Chile, Organización "Hipócrates," [1952]. 4to. 218 pages, illustrated.

Fool's Haven. By C. C. Cowley. Boston, House of Edinboro, [c. The Author, 1953]. 8vo. 210 pages. Cloth, $2.75.

—Concluded on page 162

MEDICAL BOOK NEWS

—Concluded from page 161

Living with a Disability. By Howard A. Rusk, M.D. & Eugene J. Taylor. In collaboration with Muriel Zimmerman, O.T.R. & Julia Judson, M.S. New York, Blakiston Co., [c. The Authors, 1953]. 8vo. 207 pages, illustrated. Cloth, $3.50.

May's Manual of the Diseases of the Eye. For Students and General Practitioners. Revised and Edited by Charles A. Perera, M.D. 21st Edition. Baltimore, Williams & Wilkins Co., [c. Rosalie A. May, 1953]. 12mo. 512 pages, illustrated. Cloth, $6.00.

Surgical Pathology. By Lauren V. Ackerman, M.D. St. Louis, C. V. Mosby Co., [c. 1953]. 4to. 836 pages, illustrated.

Modern Clinical Psychiatry. By Arthur P. Noyes, M.D. 4th Edition. Philadelphia, W. B. Saunders Co., [c. 1953]. 8vo. 609 pages. Cloth, $7.00.

Clinical Management of Behavior Disorders in Children. By Harry Bakwin, M.D. & Ruth Morris Bakwin, M.D. Philadelphia, W. B. Saunders Co., [c. 1953]. 8vo. 495 pages, illustrated. Cloth, $10.00.

Human Embryology. By Bradley M. Patten, Ph.D. 2nd Edition. New York, Blakiston Co., [c. 1953]. 4to. 798 pages, illustrated. Cloth, $12.00.

Standard Methods of Clinical Chemistry. Vol. 1. By the American Association of Clinical Chemists. Editor-in-Chief: Miriam Reiner. New York, Academic Press, [c. 1953]. 8vo. 142 pages, illustrated. Cloth, $4.50.

What You Should Know About Mental Illness. By Orin Ross Yost, M.D. New York, Exposition Press, [c. 1953, The Author]. 8vo. 165 pages. Cloth, $3.50.

Die Dystrophie Als Psychosomatisches Krankheitsbild. Entstehung, Erscheinungsformen, Behandlung, Begutachtung. Medizinische, Sociologische und Juristische Spätfolgen. By Kurt Gauger, M.D. Munich, Urban & Schwarzenberg, [c. 1952]. 8vo. 228 pages. Cloth, DM 14.80.

Grundzüge der Pathologischen Physiologie. By Prof. Helmut Vogt. Munich, Urban & Schwarzenberg, [c. 1953]. 8vo. 582 pages, illustrated. Cloth, DM 45.60.

Doctors, People, and Government. By James Howard Means, M.D. Boston, Little, Brown and Co., [c. 1953, The Author]. 8vo. 206 pages. Cloth, $3.50.

MODERN THERAPEUTICS

Use of Antibiotics in Nonbacterial Respiratory Conditions

A group of 150 patients with a nonbacterial influenza-like syndrome were given 600 mg. of acetylsalicylic acid, 500 mg. of oxytetracycline (Terramycin), or 200 mg. erythromycin every 6 hours. The average time from admission to the return of the temperature to normal for the entire group was 37 hours. The average time for the 54 treated with acetylsalicylic acid was 30 hours, for the 76 receiving oxytetracycline 41 hours, and for the 20 receiving erythromycin the time was 42 hours.

Jones, Bigham, and Manning reported in *J.A.M.A.* [*153*:262 (1953)] that serological studies were made in 16 of the patients, 11 of whom were found to have type 'A' influenza. Six of the 11 patients received acetylsalicylic acid and 5 received oxytetracycline. The average number of hours to become afebrile was 54 and 48, respectively.

Thus, the authors concluded that the antibiotics did not alter the course of the disease. No secondary bacterial infections were observed in any of the patients. When the lack of benefit, the danger from the possible development of nonsensitive fungi or bacteria, and the cost are considered, the authors concluded that the use of these antibiotics in nonbacterial influenza-like infections is not justified.

Supplementary Oral Fat Preparations

When patients are not able to consume foods of the proper nutritive level, a high caloric intake may be attained with the use of oral fat-carbohydrate emulsions. Commercially available emulsions contain 40 to 50 per cent of a vegetable oil with 10 per cent carbohydrate. Doses of 30 to 120 cc. are best given diluted in milk or water, or it may be given through a nasal tube by drip, if necessary. Approximately 1000 calories are furnished by 250 cc. of emulsion. Grollman stated in *J. Clinic Nutrition* [*1*:302 (1953)] that fat emulsions should not be given to patients with biliary tract calculi or pyloric obstruction with retention. Large amounts cause side effects such as nausea, vomiting, and diarrhea, but these are usually transitory.

New Treatment in Tetanus

A new regimen for the treatment of tetanus included the use of *o*-methoxyphenyl glyceryl ether (Resyl). This drug was given in addition to chloral hydrate, tetanus antitoxin, and penicillin, Crystacillin or chloramphenicol. The *o*-methoxyphenyl glyceryl ether was given by continuous intravenous drip as a 0.5-5.0 per cent solution to a total of 11 to 64.8 Gm. per day. Also, 8 to 24 Gm. were given orally each day. Bower reported in *Calif. Med.* [*78*:468 (1953)] on one case treated successfully. Since the report, however, six additional cases were treated with equally good results. It was noted that there was a tendency to cause a simulation of paralytic ileus as a result of the relaxing effect.

Vitamin-Hormone Relationships in Cancer Chemotherapy

Cancer research has shown that desoxypyridoxine converts an inactive dose of testosterone into one which has carcinostatic properties when the two compounds are administered in combination. This action was demonstrated against the 755 tumor tissue. Shapiro and Shils also reported in *Proc. Am. A. Cancer Res.* [*1*:49 (1953)] that the riboflavin analog, flav-

—Continued on page 74a

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0.02 mg. ethinyl estradiol plus 5 mg. methyltestosterone.
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—Continued from page 72a

otin, has been demonstrated to greatly increase the carcinostatic properties of the compound 8-azaguanine. They also pointed out that this potentiating effect of flavotin on 8-azaguanine was completely blocked by the simultaneous administration of testosterone.

Relationship of Vitamin B_{12} Deficiency and Diabetic Blindness

Clinical studies have shown a relationship between vitamin B_{12} deficiency and the development of blindness in advanced diabetes, according to Dr. B. F. Chow at the Annual Symposium Day on Diabetics, conducted by the New York Diabetes Assoc. the first week in October. Patients with retinopathy had lost the ability to utilize vitamin B_{12} while those with early retinitis had a definite deficiency of the vitamin. These findings were obtained from excretory studies following the injection of radioactive vitamin B_{12}. About 30 times more of the vitamin was excreted in the urine of diabetic patients with retinopathy than in the urine of normal healthy patients.

Chloroquine in Treatment of Lupus Erythematosus

A group of 21 patients with lupus erythematosus, 12 with the localized and 6 with the disseminated chronic discoid type and 3 with the subacute disseminated form, were treated with chloroquine diphosphate. The average dose given was 0.25 Gm. twice a day for one or two weeks followed by 0.25 Gm. daily for four to six weeks. Goldman, Cole and Preston reports in *J.A.M.A.* [*152*:1428 (1953)] that preliminary results indicate

—Continued on page 78a

new *concept*

in anti-inflammatory therapy

new *safety*

new

Potent in oral
systemic anti-inflammatory therapy

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brand of hydrocortisone

Studies indicate that hydrocortisone is the predominant natural anti-inflammatory hormone, and extensive investigations have demonstrated its superior therapeutic efficacy.

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Cortril with Terramycin *of distinct advantage in:*

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references:

1. Boland, E. W.: Ann. Rheum. Dis. 12:125, 1953. 2. Boland, E. W.: California Med. 77:1, 1952. 3. Laval, J.: A.M.A. Arch. Ophth. 59:299, 1953. 4. McDonald, F. R.; Leopold, I. H.; Vogel, A. W., and Muilberger, R. D.: A.M.A. Arch. Ophth. 49:400, 1953. 5. Steffensen, E. H.: J.A.M.A. 159:1660, 1952.

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MODERN THERAPEUTICS

—Continued from page 74a

that chloroquine is as effective as quinacrine in the treatment of this disease, with less side effects. Great improvement was observed in 14 of the patients with no change in 5. Only one patient in the series was unable to continue treatment because of repeated nausea and emesis, although the patient's condition greatly improved as a result of therapy. Weight loss, abdominal cramps, and diarrhea each disturbed one patient, respectively, but improvement in the disease occurred in each case.

Although the occurrence of toxic symptoms in this series of patients was much lower than with quinacrine, the author warned that the possibility of the occurrence of toxic symptoms with prolonged administration must be considered.

Isoniazid Therapy in Tuberculosis

The hard core of the tuberculosis problem has long been the difficulty in eliminating chronic sources of infection by means other than isolation, according to

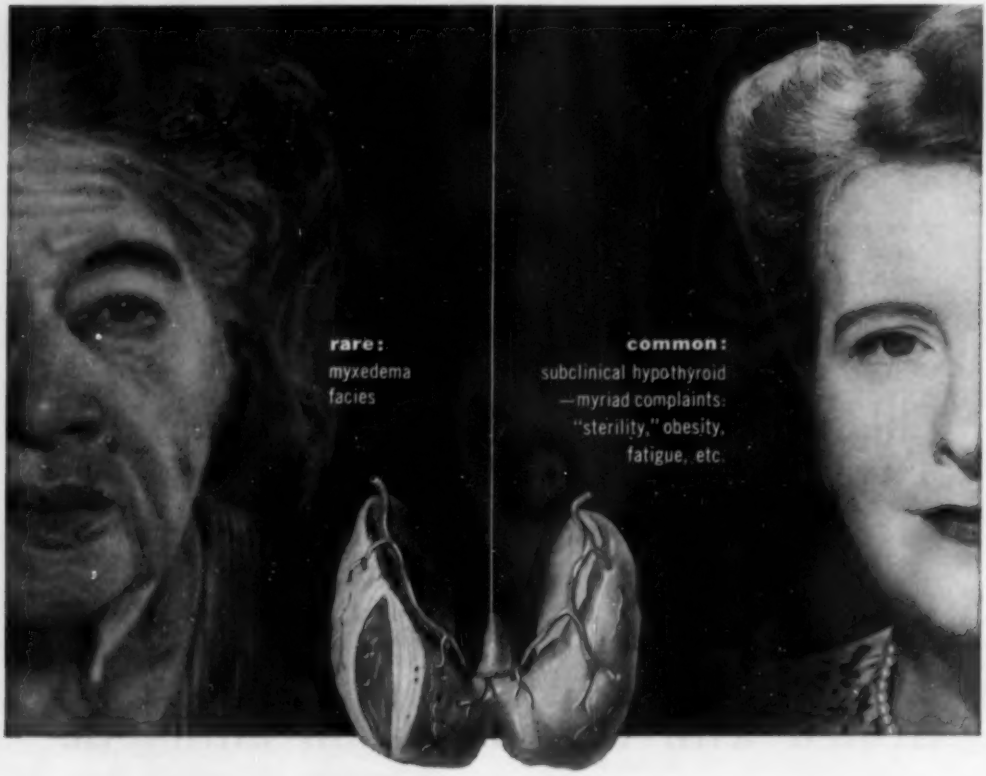
—Concluded on page 82a

Diagnosis, Please!

ANSWER
(from page 25a)

PANCREATIC CONCRETIONS

Note the numerous small calcareous deposits distributed throughout the pancreas, beginning in the head and extending well into the tail.



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Thiamine HCl	0.5 mg.
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for your
assurance of
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—Concluded from page 78a

Joiner and MacLean in *Lancet* [*11*: 152 (1953)]. The efficacy with which combined therapy with isoniazid and streptomycin eliminate the bacteria from the sputum of chronic tuberculosis patients may provide the solution to this problem. The authors conducted a year's study of the effects of PAS, isoniazid, and streptomycin administered alone in combinations to 68 chronic tubercular patients. Of these, 23 received 250 mg. of isoniazid daily and 1 Gm. of streptomycin 6 times a week. Most of these patients showed weight gains, no bacteria could be found in the sputum during later stages of therapy, there were no clinical elapses during therapy, and this combination was more pleasant for the patient.

Potency of ACTH Preparations by Different Routes of Administration

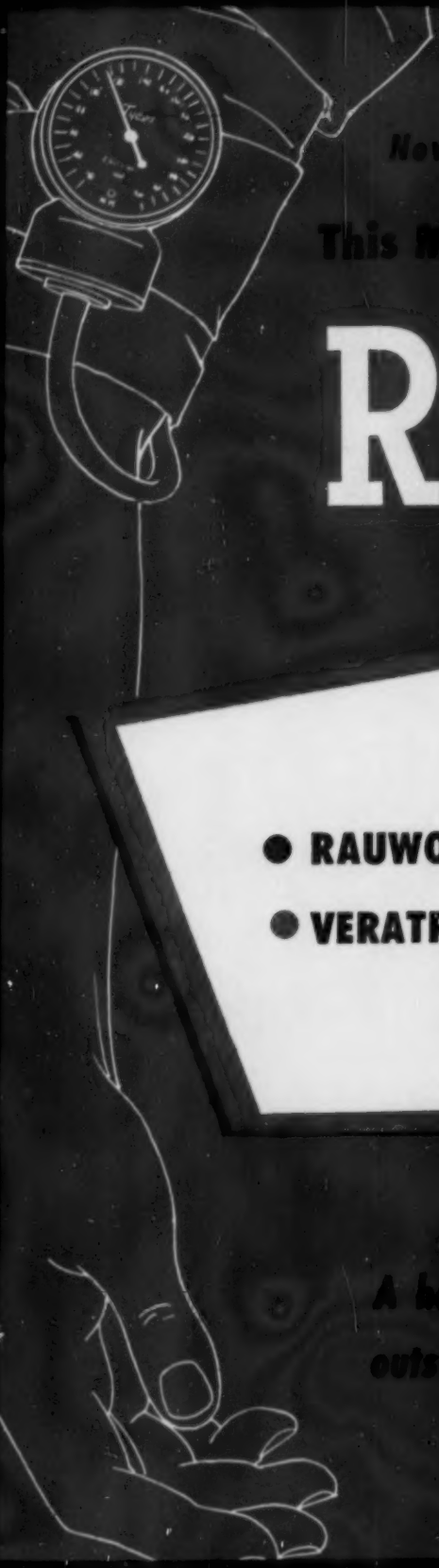
In an effort to determine the cause for the quantitative differences in potency for ACTH preparations reported by various authors, Bates used an acid extract and an alkaline extract to study the effect of intravenous and subcutaneous routes of administration on the potency as determined by the ascorbic acid depletion of the adrenal gland. Writing in *Endocrinol.* [*52*:266 (1953)], the author reported that it was found that a dose 100 to 1000 times larger may be required subcutaneously than intravenously to cause an equivalent ascorbic acid depletion. It was also found that the acid extract gave higher results subcutaneously than the alkaline extract. This was reversed following intravenous administration. It was felt that the differences between the acid and the alkaline extract was due to the presence of contaminants which affected the rate of absorption. Most differences in physiological activity of ACTH are probably better explained on the basis of different rates of absorption rather than on the current theory that there is more than one factor composing ACTH.

Chlordane Vapor Toxicity

A study was conducted by Ingle and reported in *Science* [*118*:213 (1953)] on the toxicity of the insecticide chlordane (1, 2, 4, 5, 6, 7, 8, 8,-octachloro-4, 7-methano-3a, 4, 7, 7a-tetrahydroindane) on warm blooded animals. The animals used were Swiss albino mice. They were subjected to the vapor of chlordane for 15 days and then sacrificed. No deaths occurred nor were there any toxic manifestations including the organs and tissues at autopsy. After adding an intermediate in the chlordane preparation reaction, hexachlorocyclopentadiene, toxic manifestations were pronounced. The author concluded that previous reports of toxicity to chlordane were due to the presence of this intermediate in the earlier commercial supplies of chlordane. Present supplies have largely been freed of this and other intermediates.

Invert Sugar Solution for Injection

Invert sugar is much more satisfactory than glucose as a source of energy when given by injection, according to deJong and Moeys in *Pharm. Weekbl.* [*88*:317 (1953)] through *J. Pharm. Pharmacol.* [*5*:647 (1953)]. Invert sugar is quicker in action, there is less danger of thrombophlebitis, and there is less excretion in the urine. Such a colorless solution may be prepared by dissolving 950 Gm. of sucrose in 4.5 liters of water for injection containing 5 cc. of N hydrochloric acid. The reaction is brought about by heating for 1 hour at 100° C. The solution is then cooled and the pH adjusted to about 6. The solution may then be shaked with asbestos, filtered, filled into infusion bottles and then sterilized by heating for 1 hour at 100° C.



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THE ADVANTAGES OF COMBINING RAUWOLFIA SERPENTINA and VERATRUM VIRIDE

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● THE DISTINCTIVE ACTION OF RAUWOLFIA SERPENTINA

Exerting a mild hypotensive influence, Rauwolfia serpentina also produces: relaxing sedation, bradycardia—not tachycardia, and relief of headache and dizziness. By inducing a state of calm tranquility, it creates a sense of well-being and a more favorable outlook. Rauvera contains a highly purified extract of Rauwolfia serpentina alkaloids, the alseroxylon fraction, which is tested in dogs for its hypotensive, sedative, and bradycrotic actions.

● THE POTENT HYPOTENSIVE ACTION OF VERATRUM VIRIDE

Termed one of the safest of the more potent hypotensives, Veratrum viride lowers blood pressure by central action. Like Rauwolfia serpentina, it does not interfere with the postural reflexes, since it is not ganglionic or adrenergic blocking. Its influence is exerted promptly, in contrast to that of Rauwolfia serpentina, which may take weeks to develop to maximum intensity.

IN MODERATE AND SEVERE ESSENTIAL HYPERTENSION

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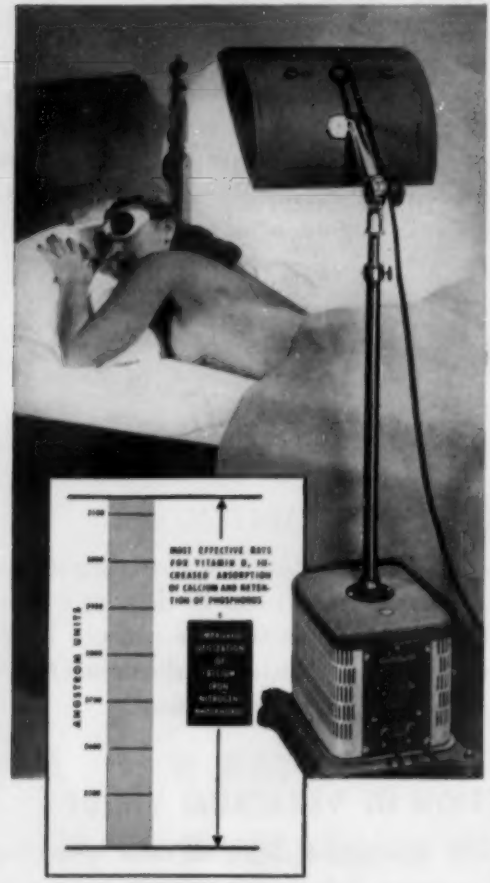

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1923

NEWS AND NOTES

Reports Airplane Control Cable Useful in Orthopedic Surgery

Stainless steel airplane control cable, because of its flexibility, great tensile strength and tolerance by tissue, offers a solution to some of the problems of orthopedic surgery, it was reported in a recent *Journal of the American Medical Association.*

Use of the cable to repair a ruptured tendon in the kneecap of a 24-year-old woman was described by Dr. Fremont A. Chandler, Chicago. The patient had broken both legs. When the breaks had healed she was unable to extend or flex her legs because of ruptured tendons attached to the kneecaps. Use of ordinary stainless steel wire failed to correct the situation because it soon broke into numerous pieces. Use of airplane cable in one kneecap proved successful, and the knee was still active one year after operation. The patient has requested a similar correction of the other kneecap.

"The use of 18-8 stainless steel wire has proved to be unsatisfactory in the fixation of skeletal parts during the course of surgical procedures," Dr. Chandler stated. "This failure is due to the crystallizing quality of this alloy. Such wires may remain intact for months, unaffected by tissue fluids, and then break into multiple fragments because of movement of the bone fragments or pressure of the adjacent soft parts. The tendency to crystallization and fracture becomes greater as the size of the wire increases.

"In order to overcome this defect of single wire strands, stainless steel airplane control cables have been employed. The strength and flexibility of these cables make them adaptable to many surgical problems. It is constructed of seven strands, each of which is composed of seven strands of very fine 18-8 stainless steel wire. Thus, a 1/16 inch cable is

—Continued on page 90a

—Continued from page 88a

composed of 49 strands of twisted wire permitting great flexibility and strength. When thoroughly cleansed, this cable is tolerated by bone and soft tissue."

Warns Against Excessive Use of Antibiotics

Possibility of an increase in the number of deaths due to excessive use of antibiotics has been forecast by Dr. A. L. Tatum, chairman of the University of Wisconsin department of pharmacology.

Writing in recent issues of the *Wisconsin Medical Journal*, Dr. Tatum said increasing use of the drugs is leading to allergic sensitization of more and more persons. This is almost certain to increase the frequentcy of "fatal consequences," he said.

At the same time, increased resistance of organisms to antibiotic activity is being developed. Not only will a disease-producing bacterium becoming resistant to one antibiotic, it can carry that tolerance over to the activity of other antibiotics.

These drugs should be considered as "emergency therapeutic crutches" to be used only in serious threatening conditions, he warned.

He cited penicillin as an example of the Jekyll-Hyde personality or nature of drugs. Despite its outstanding record of usefulness, it is "positively outside the category of normal physiologic substances and is therefore a foreign material."

Reviewing recent medical literature Dr. Tatum cited reports of death following complications due to the body's reaction to antibiotics.

Other studies indicate disease organisms are rapidly growing resistant to the killing action of antibiotics. Bacteria that reproduce in a period of minutes, Dr. Tatum explained, can adapt very quickly to the threat of these drugs. Small changes in a second generation bacterium, when repeated and intensified every few minutes can conceivably add up to a very considerable change in a period of a few days or weeks.

"The process of 'survival of the fittest' does the rest," he added.

Not only are patients, who receive antibiotics, producing drug-resistant strains of bacteria, but these organisms are being passed on to healthy persons. These remain resistant to antibiotics for an indefinite period, studies indicate.

Dr. Tatum advised that in the critical instances when use of antibiotics is indicated they "should be used in large doses in order to avoid the development, or augmentation of drug tolerance by the bacteria." These large doses will kill off all bacteria, leaving none to develop tolerance, he said.

Reports New Abrasive Method of Treating Skin Defects

A new technique for treating acne scars and other skin defects — through local freezing of the skin and abrasion of the tissue by a revolving wire brush—was described in a recent *Archives of Dermatology and Syphilology*.

Successful use of the technique on 273 patients was reported by Dr. Abner Kurtin, New York. Most of the patients have been followed for at least two years, and some for as long as four years, without recurrence of the defects.

The procedure consists of first chilling the skin involved by applying a chemical ice pack for 20 minutes. The skin is then cleansed with alcohol. Ethyl chloride, an anesthetic, is sprayed on the area to be abraded, and a current of air directed on the site by means of a mounted blower.

Freezing occurs within a few seconds, making the skin insensitive, bloodless and rigid. Three square inches are frozen at one time and treated individually, as ex-

—Continued on page 92a

Here's a New Advance in Oral Penicillin

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SUPPLIED. Bottles of 60 cc. (12 teaspoonful doses).

Complete literature available on request.
White Laboratories, Inc., Kenilworth, New Jersey.

—Continued from page 90a

perience has shown that an area this size can be treated adequately before thawing begins, Dr. Kurtin stated.

Planing of the skin is accomplished by means of a small brush made of stainless steel wire, each strand of which is slightly curved. The brush is attached through a flexible hand piece and shaft to a mounted motor. The motor rotates 12,000 times a minute and is operated by a foot switch permitting variable speed controls.

Following abrasion, a piece of dry gauze is applied to the area. Dressings are changed daily, and complete healing usually occurs within a week. When more than one treatment is necessary, the procedure can be repeated in four weeks.

In all cases except one, healing occurred without complications; in the one case, the complication was eliminated within a short period, he stated. The healed skin was soft and pliable, and pigmentation returned to normal.

Urges Sanitation of Crushed Ice

Because water-borne diseases may easily be spread by contaminated ice, ice used in drinks or in direct contact with food should conform bacteriologically to the accepted standards for potable water, it was stated editorially in the *Journal of the American Medical Association*.

"Recent investigation has shown that crushed ice for these purposes is often heavily contaminated with coliform organisms [bacterial contaminants]," the editorial pointed out.

"These organisms may be introduced into crushed ice in many ways, chief among which are the introduction of dust

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during freezing into the cake from which the crushed ice is made; contamination of the cake from the floors of freezing rooms, trucks and restaurants; and contamination from chippers, crushed ice containers or human hands during dispensing. Of these, handling during dispensing was found to be the most prolific source."

In an experiment to eliminate bacteria from crushed ice, a chlorine solution was added to a container of crushed ice so that it almost covered the ice.

"As a result, the bacterial count was greatly reduced and no coliform organisms were found in any of the samples taken," the editorial said. "The best feature of this procedure was that no chlorine flavor was imparted to the ice water or iced drinks.

Chronic Diarrheas—Diagnosis and Medical Management

L. M. Hardt at the 1953 Convention of the International Academy of Proctology classified the chronic diarrheas as follows: physiological; due to parasitic infections; due to bacterial infections; idiopathic ulcerative colitis; malignant and benign tumors; allergies; functional. The physiological types of chronic diarrhea include diarrhea due to achlorhydia, gastric surgery, or pancreatic insufficiency; and fatty diarrheas, of which non-tropical sprue is the most important type. In diarrhea due to pancreatic deficiency, large doses of pancreatin are indicated with a low fat diet and vitamin supplements. In non-tropical sprue, a high protein, low fat diet is indicated with calcium by mouth and vitamin supplements, especially vitamin K, A, D, and B_1; B_{12} and folic acid are also indicated in cases in which the blood count shows megaloblasts to be present. A period of bed rest is also important

—Continued on page 98a

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NEWS AND NOTES

—Continued from page 94a

in the treatment of sprue. In diarrhea due to endocrine disorders, the treatment is that indicated for the endocrine disease. Diarrheas due to parasitic infections include amebic dysentery, and diarrhea due to Gardia lamblia and Trichomonas hominis. In amebic dysentery, the drug most widely used is emetinehydrochloride, in repeated courses if necessary; carbarsone should be given with emetine, or following each course of emetine. Diodoquin is also indicated, given for three weeks after the course of emetine and carbarsone. Violorm has also been found of value in amebic dysentery in cases where carbarsone is not well tolerated, or if there is a relapse after therapy, or if amebic cysts are present following two full courses of emetine, carbarsone and diodoquin. If there is secondary bacterial infection, sulfadiazine is the treatment of choice. In diarrheas due to Giardia lamblia, the most effective drug has been found to be Atabrine, combined with a diet high in protein. Diodoquin has also been employed with good results. Of the chronic diarrheas due to bacterial infection, tuberculous ileocolitis has now become rare with the modern treatment of tuberculosis with streptomycin, PAS, and isoniazid; and chronic bacillary dysentery is also rare. In the treatment of idiopathic ulcerative colitis, rest, and diet high in proteins and low in residue, with vitamins are indicated; amino acid concentrates may be used to increase the protein intake. Insoluble sulfonamides, and the newer antibiotics have recently been used in ulcerative colitis, with varying results; aureomycin has given better results than other antibiotics. Surgery may be necessary, especially when there is no improvement under medical treatment. In cases

—Continued on page 100a

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(1) Burns, J. J., and others: J. Pharmacol. & Exper. Therap. *106*:375, 1952. (2) Byron, C. S., and Orenstein, H. B.: New York State J. Med. *53*:676 (Mar. 15) 1953. (3) Currie, J. P.: Lancet *2*:35 (July 5) 1952. (4) Davies, H. R.; Barter, R. W.; Coe, A., and Hirson, C.: Brit. M. J. *2*:1392 (Dec. 27) 1952. (5) Delisi, N. E., and Griffin, A. C.: Stanford M. Bull. *2*:65, 1953. (6) Domenjoz, R.: Federation Proc. *11*:339, 1952. (7) Domenjoz, R.: Internat. Rev. Med. *165*:467, 1952. (8) Goldfain, E.: J. Oklahoma M. A. *46*:27, 1953. (9) Gutman, A. B., and Yü, T. F.: Am. J. Med. *13*:744, 1952. (10) Kuzell, W. C.: Annual Review of Medicine, Stanford, Annual Reviews, *2*:367, 1951. (11) Kuzell, W. C., and Schaffarzick, R. W.: Bull. on Rheumatic Diseases *3*:33, 1952. (12) Kuzell, W. C.; Schaffarzick, R. W.; Brown, B., and Mankle, E. A.: J.A.M.A. *149*:729 (June 21) 1952. (13) Kuzell, W. C., and Schaffarzick, R. W.: California Med. *77*:319, 1952. (14) Patterson, R. M.; Benson, J. F. and Schoonberg, P. L.: U. S. Armed Forces M. J. *4*:109, 1953. (15) Rowe, A., Jr.; Taft, R. W.; Mechanick, P. G., and Rowe, A. H.: Am. Pract. & Digest Treat., in press. (16) Smith, C. H., and Kunz, H. G.: J. M. Soc. New Jersey *49*:306, 1952. (17) Steinbrocker, O., and others: J.A.M.A. *150*:1087 (Nov. 15) 1952. (18) Stephens, C. A. L., Jr., and others: J.A.M.A. *150*:1094 (Nov. 15) 1952. (19) Wilkinson, E. L., and Brown, H.: Am. J. M. Sc. *225*:353, 1953.

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—Continued from page 98a

where the presence of tumor is suspected careful diagnostic studies should be made. In chronic diarrhea due to allergy the use of epinephrine or ephedrine is indicated for relief of the more acute symptoms; careful studies should be made to determine the food or foods to which the patient is allergic and these should be eliminated from the diet. In cases of chronic diarrhea, in which careful study has eliminated any organic cause for the condition, and the condtion can be considered as "functional," psychotherapy is indicated as well as the use of sedatives and antispasmodics.

Electric Shock Treatments Aid in Drug Addiction Withdrawal

Electric shock treatments eliminate unnecessary suffering and danger during withdrawal of drugs from addicts, in the opinion of Drs. F. B. Thigpen, C. H. Thigpen and H. M. Cleckley, Augusta, Ga.

Writing in a recent *Archives of Neurology and Psychiatry*, the doctors reported on a study of 34 addicts treated by this method. Addiction existed from one month to 20 years, and electric shock treatments necessary to obtain successful results ranged from three to 40. Many of the patients had such physical complications prior to treatment as heart kidney and liver diseases, migraine and hardening of the arteries. None of the complications was affected by therapy.

"Current reports indicate that approximately one person in each 3,000 of our population is seriously addicted to drugs of the alkaloid type," the doctors pointed out. "As a social, economic and medical problem, drug addiction demands the attention of physicians, challenges their best efforts."

Usually the treatment of choice is gradual withdrawal of the drug, the doctors said, a procedure which requires at least

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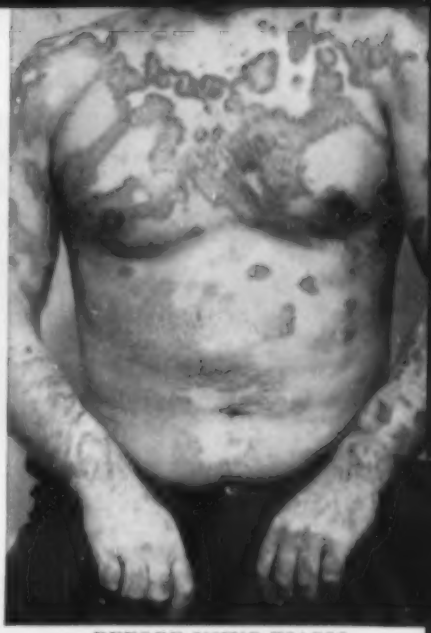
ACANTHOSIS
...the basic lesion of
PSORIASIS



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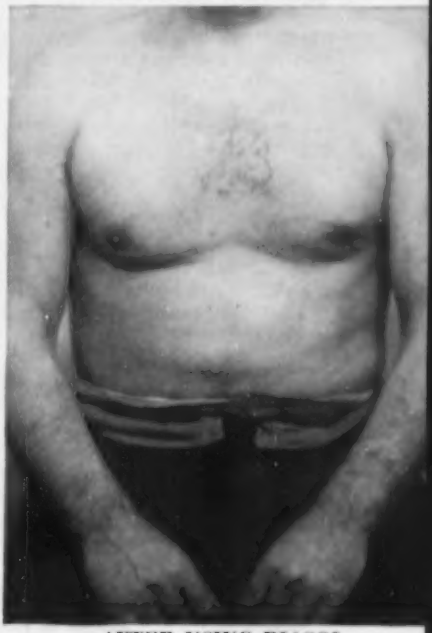

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Acanthosis is a hyperplasia and thickening of the prickle cell layer (rete mucosa) of the epidermis. It is the characteristic local lesion of psoriasis.

RIASOL owes its success in psoriasis to active penetration of the stratum corneum, so as to reach the prickle cell layer. Control of acanthosis by the alterative action of the mercury-soap combination results in gradual disappearance of the lesions.

Clinical tests show this result in 76% of patients treated with RIASOL. In a series of 231 cases of psoriasis reported by two dermatologists, there were only 16.5% of remissions with all other types of treatment.

RIASOL contains 0.45% mercury chemically combined with soaps, 0.5% phenol and 0.75% cresol in a washable, non-staining, odorless vehicle.

Apply daily after a mild soap bath and thorough drying. A thin invisible, economical film suffices. No bandages required. After one week, adjust to patient's progress.

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RIASOL for PSORIASIS

The Case of URTICARIA FROM PERFUME

WHEN we consider allergy to cosmetics, we usually think of them as giving rise to various contact dermatoses, allergic rhinitis, or asthma. Too often we overlook the fact that gastro-intestinal symptoms may arise from the small amount of lipstick ingested from the lips, and that even migraine may be set off by certain odors. The following is a report of a baffling case of intractible urticaria—unexplainable until a chance observation led to the resolving clue.

Mrs. B., a housewife, had been suffering for six years from a chronic, recurrent urticaria. During these six years, she had been under the care of competent dermatologists, allergists, internists, and surgeons.

Dermatologic management consisted of injections of histamine or calcium, ingestion of ephedrine, and injections of epinephrine hydrochloride. Roentgen ray therapy, ultraviolet irradiation, and hemotherapy also were used to no avail.

The internists looked for foci of infection, and both a tonsillectomy and hemorrhoidectomy were performed. After all probable etiologic factors had been considered and ruled out, the patient was told that her hives were due her neurovascular instability, and that she should try to forget her illness.

When Mrs. B. was first seen by a colleague, he noted that she was heavily perfumed. She volunteered the information that her hobby was collecting and using perfume.

Basing the approach to Mrs. B.'s problem on the theory of osmyls, she was advised to remove all traces of perfume from her person and her home, and to avoid groups where women used perfumes heavily. She was told to use only AR-EX Unscented Cosmetics.

The approach was at once both diagnostic and therapeutic. After one week of living in perfume-free atmosphere, Mrs. B.'s hives disappeared. Three weeks later she reported that she felt better than she had in many years. As long as she avoided perfumes she had no recurrences.

Mrs. B. found AR-EX Unscented Cosmetics the perfect answer to her beauty requirements. The shades are smart and fashionable, and their complete freedom from perfumes helps her avoid these sensitizing agents without sacrificing her desire to be well groomed.

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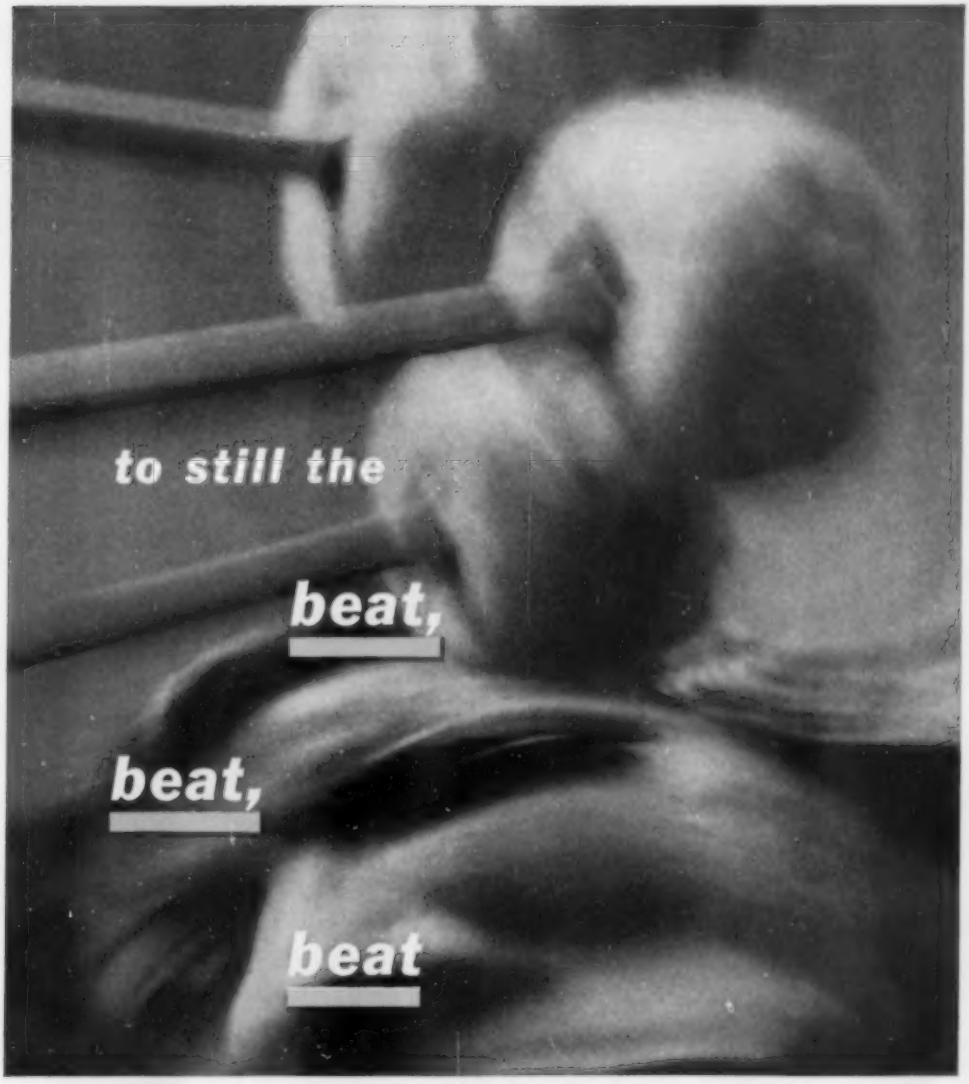

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—Continued from page 100a

135 days hospitalization. Many serious physical and emotional symptoms and problems are present during such withdrawal.

"Our patients are handled in the psychiatric section of a general hospital, and we have no legal means of holding them against their will. Before we adopted our present method, few addicts remained long enough to be freed from their drugs. Many lacked a full and strong intention of working all the way to abstinence. Apparently they began treatment with the limited goal of reduction, hoping to regain a lost physiologic responsiveness to their drugs so that smaller, and more readily available, doses would give the effects they desired, but, because of progressive habituation, could no longer obtain regularly.

"Some patients, finding themselves really free from the vicious cycle, are able to work successfully toward rehabilitation. It has appeared to us that underlying conditions, particularly elements of real depression, are also favorably modified by electric convulsive treatment, and that such modifications may be of lasting value to the patient."

Mental Patient Greatly Improved by Anesthetic Brain Injection

A severely incapacitated mental patient was dramatically improved by the injection of procaine, a local anesthetic, into the white matter of the frontal lobes of his brain, it was reported in a recent *Journal of the American Medical Association.*

The patient, a 52-year-old man, had been in mental institutions for varying

—Continued on page 108a

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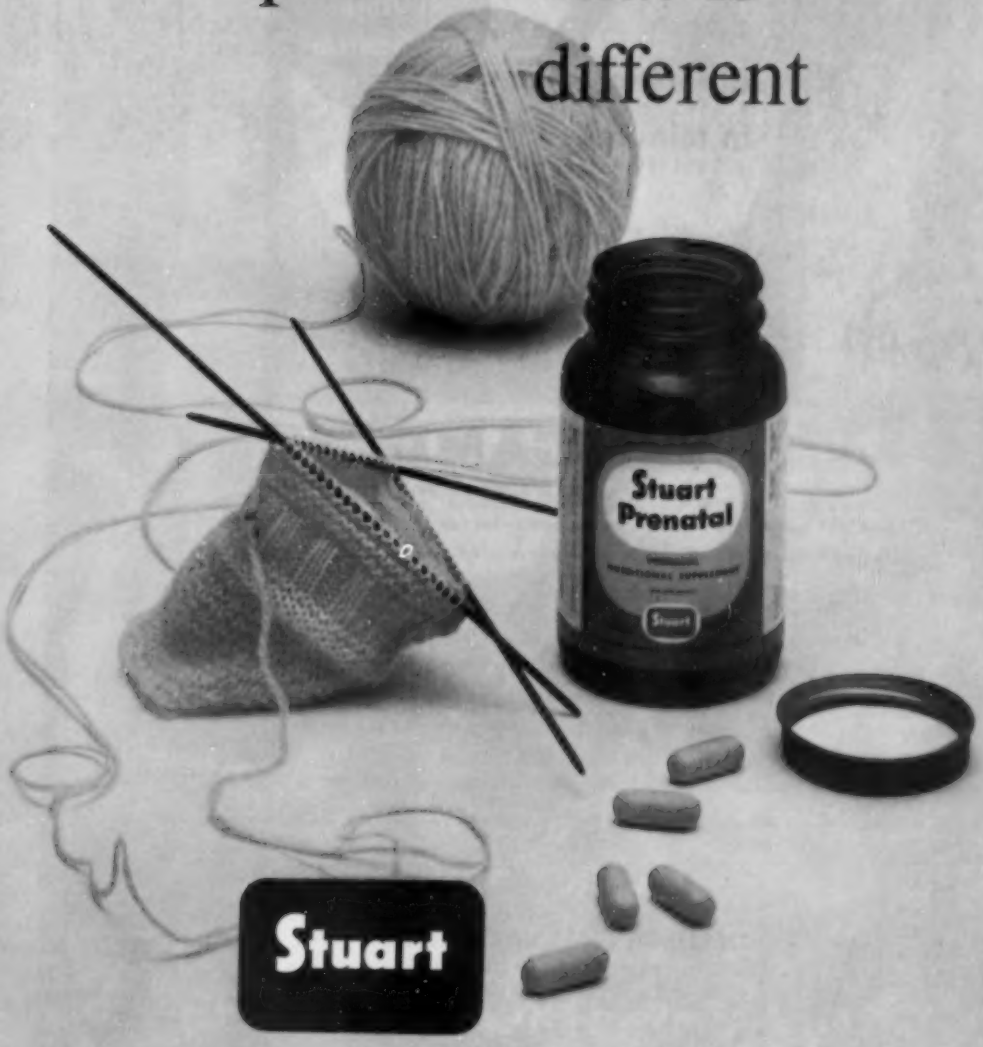

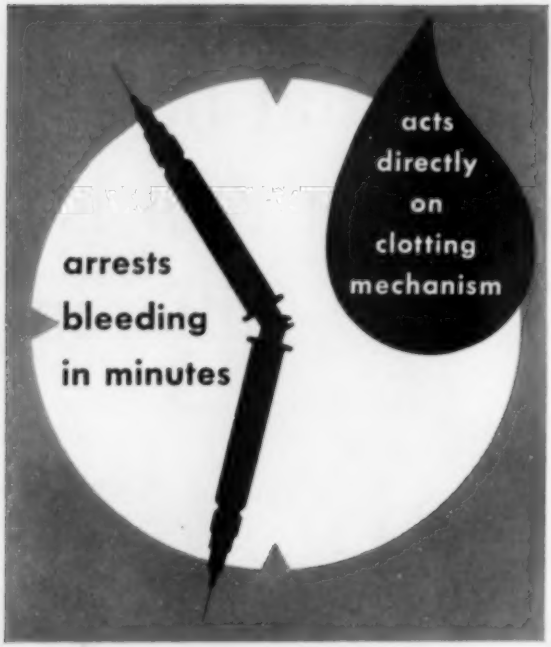

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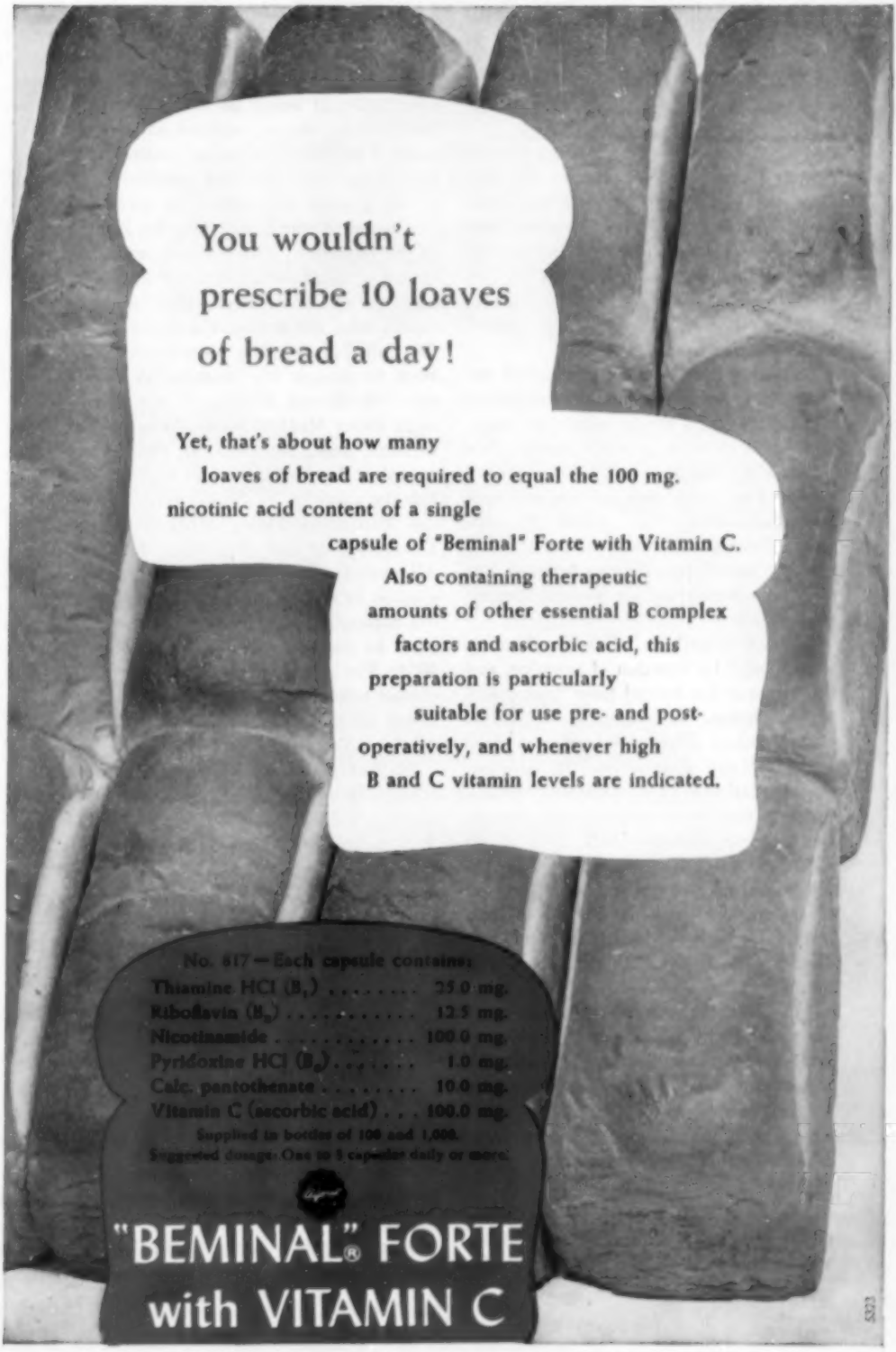

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—Continued from page 104a

periods for many years prior to the time when the anesthetic treatment was instituted. He suffered from delusions and obsessive fears, according to the article. The last time he was institutionalized his mental condition continued to decline despite psychotherapy, and this radical treatment was begun.

Following the injection, the patient became very confused, but this condition cleared within 24 hours; within 48 hours, marked improvements were noted. Two weeks after the first injection, a second was administered, and his improvement was maintained. The patient was dismissed from the institution a month after the first injection, and has continued free of incapacitation for six months, the report stated.

Nine other patients, all schizophrenics, were treated by injection of procaine, and the response has ranged from "recovered" to "no change," according to the article. Complications from the treatment have been few and shortlasting. In addition, several patients have voiced preference for this type of treatment over electroshock therapy, it was added.

"Injection of various substances into the frontal lobe of the brain has been one of the various methods utilized to treat intractable pain and certain psychiatric disorders since 1936," the article pointed out.

"The 10 patients in our series have demonstrated that the injection of procaine is safe, with few complications and with less resultant regressive phenomena than after surgical lobotomy."

Mississippi Valley Medical Society 1954 Essay Contest

The Thirteenth Annual Essay Contest of the Mississippi Valley Medical Society will be held in 1954. The Society will offer a cash prize of $100.00, a gold medal, and a certificate of award for the best unpublished essay on any subject of general medical interest (including medical economics and education) and practical value to the general practitioner of medicine. Certificate of merit may also be granted to the physicians whose essays are rated second or third best. Contestants must be members of the American Medical Association who are residents and citizens of the United States. The winner will be invited to present his contribution before the 19th Annual Meeting of the Mississippi Valley Medical Society to be held at Chicago, Sept. 23, 24, 1954, the Society reserving the exclusive right to first publish the essay in its official publication—the *Mississippi Valley Medical Journal* (incorporating the *Radiologic Review*). All contributions shall be typewritten in English in manuscript form, submitted in five copies, not to exceed 5000 words, and must be received not later than May 1, 1954. The winning essays in the 1953 contest appear in the January 1954 issue of the *Mississippi Valley Medical Journal* (Quincy, Ill.)

Further details may be secured from Harold Swanberg, M.D., Secretary, Mississippi Valley Medical Society, 209-224 W.C.U. Building, Quincy, Ill.

Congress of Chest Physicians

From the 4th to the 8th October 1954, the III International Congress on Diseases of the Chest that the "American College of Chest Physicians" celebrates every second year, in the chosen country, will be held in Barcelona (Spain).

Free discussions will be held on Diseases of the Chest and Thoracic Surgery: Anesthesiology, Experimentation, Tuberculosis, Cancer, Thoracic Wall, Lung, Pleura, Mediastinum, Esophagus, Pericardium, Heart, Great vessels and Diaphragm.

The Congress will meet in Sections cor-

—Continued on page 112a

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Prolonged effect of mannitol hexanitrate

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New and Nonofficial Remedies: A.M.A. Council on Pharmacy and Chemistry, J. B. Lippincott, p. 243, 1953.

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Med. Times *81*:266 (Apr.) 1953.

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J.A.M.A. *147*:1311 (Dec.) 1951.

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Delaware State M. J. *22*:283 (Oct.) 1950.

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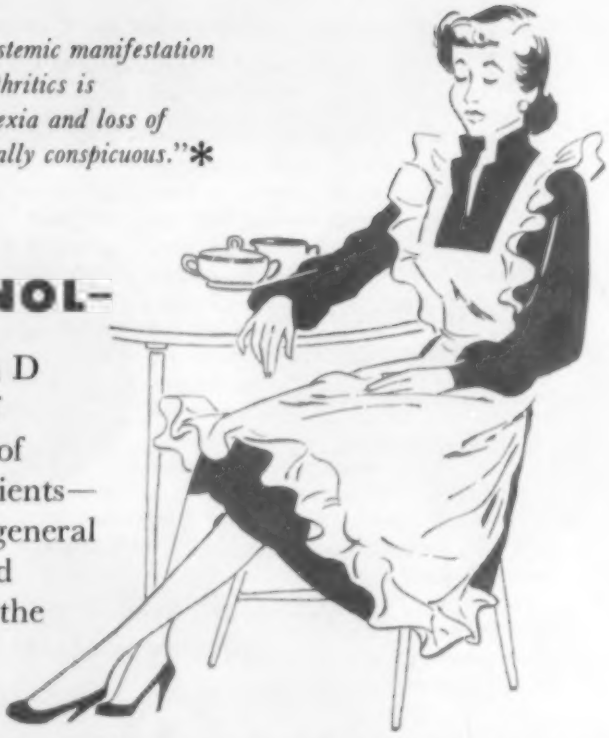

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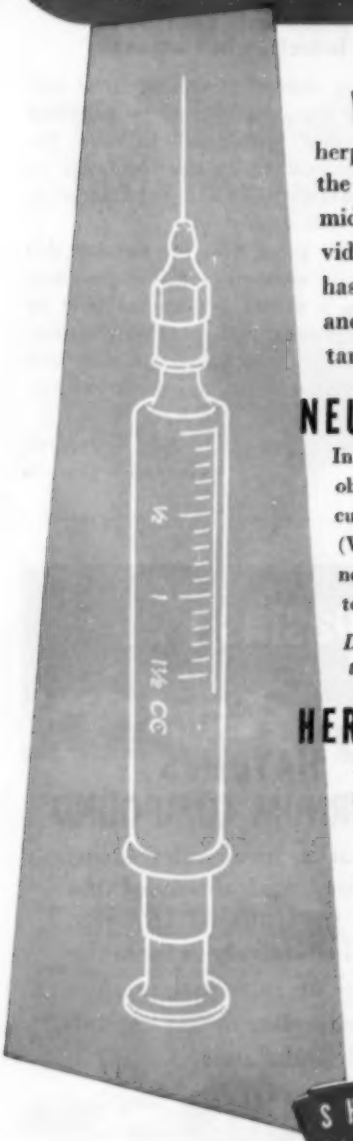
each capsule contains:	
VITAMIN D	50,000 U.S.P. Units
VITAMIN A	5,000 U.S.P. Units
VITAMIN C	75 mg.
VITAMIN B_1	3 mg.
VITAMIN B_2	2 mg.
VITAMIN B_6	0.3 mg.
NIACINAMIDE	15 mg.
CALCIUM PANTOTHENATE	1 mg.
MIXED TOCOPHEROLS (Type IV)	4 mg.

* Bach, T. F., Ed.: Arthritic and Related Conditions, (Philadelphia: F. A. Davis Co.,) 1948, p. 95.

J. B. ROERIG AND COMPANY / CHICAGO 11, ILLINOIS

PROTAMIDE

FOR THE PATIENT SEEKING RELIEF FROM NERVE ROOT PAIN



WHEN the disturbing and painful symptoms of herpes zoster, or the stinging distress of neuritis brings the patient to you, quick relief is expected. Protamide helps solve this therapeutic problem by providing prompt and lasting relief in most cases. This has been established by published clinical studies, and on the valid test of patient-response to Protamide therapy in daily practice.

NEURITIS (Sciatic—Intercostal—Facial)

In a recent study* of 104 patients, complete relief was obtained in 80.7% with Protamide. 49 were discharged as cured after 5 days of therapy with no subsequent relapse. (Without Protamide, the usual course of the type of neuritis in this series has been found to be three weeks to over two months.)

Dosage: one 1.3 cc. ampul intramuscularly, daily for five to ten days.

HERPES ZOSTER

A study* of fifty patients with Protamide therapy resulted in excellent or satisfactory response in 78%. (No patient who made a satisfactory recovery suffered from postherpetic neuralgia.) Thirty-one cases of herpes zoster were treated with Protamide in another study.* Good to excellent results were obtained in 28.

Dosage: one 1.3 cc. ampul intramuscularly, daily for one to four or more days.

* *A folio of reprints of these studies will be sent on request.*

SHERMAN LABORATORIES
BIOLOGICALS • PHARMACEUTICALS
WINDSOR DETROIT 31, MICH. LOS ANGELES

NEWS AND NOTES

—Continued from page 108a

responding to each of the thoracic specialties. At the end of the meetings there will be an hour of discussion to be held on the themes that will be announced in time.

Five minutes will be given as a minimum and fifteen as a maximum for the summaries.

During the Congress an exposition of surgical, clinical, radiological and photographic materials as well as pharmaceutical products, books and arts related to medicine will be presented at the "Hospital de la Santa Cruz y de San Pablo" of Barcelona, site of the Congress.

The official languages will be: Spanish, English, German and French.

All physicians and surgeons who wish to attend this Congress, should write for information to the General Secretaryship of the Congress: Córcega, 393—4º. 1ª.—Barcelona (Spain).

Bovine Brucellosis Vaccine Causes Infection in Humans

The first definite proof that direct contact with the vaccine used to immunize cattle against brucellosis can cause human brucellosis (undulant fever) was reported in an article and an editorial in a recent *A.M.A. Journal*.

With this proof went the warning that the vaccine contains a viable pathogen, and that it should be handled only by qualified persons, preferably veterinarians, and then with the knowledge that accidental contact with it may result in active brucellosis.

The case reports of two 25-year-old

—Concluded on page 114a

NEWS AND NOTES

—Concluded from page 112a

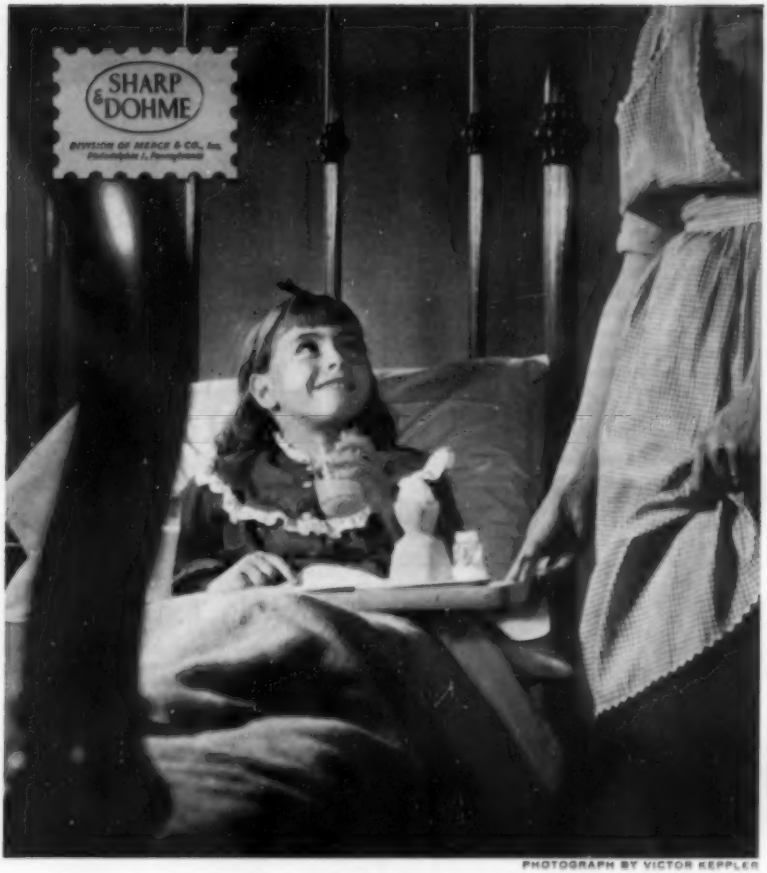
veterinarians who became ill after accidental infection with the vaccine, produced from Brucella abortus, strain 19, while immunizing calves were described by Drs. Wesley W. Spink and Hugh Thompson, Minneapolis. The doctors are associated with the department of medicine and the student health service, University of Minnesota Hospitals and Medical Schools.

One veterinarian became infected when the needle of the syringe containing the vaccine accidentally entered the palm of his right hand. In the second victim, the vaccine accidentally splashed into both eyes. Both men became quite ill, but recovered following treatment.

"An effective means for immunizing cattle against brucellosis involves the infection of viable organisms of Br. abortus, strain 19," the doctors stated. "In the campaign to eradicate bovine brucellosis, strain 19 is being used extensively in the United States and in other countries where Bang's disease is a problem.

"This report on human brucellosis caused by strain 19 does not imply in any way that the use of this vaccine should be curtailed. It does emphasize, however, that strain 19 is not innocuous and that it should be handled only by qualified persons, preferably veterinarians, and then with the knowledge that the accidental introduction of the organisms into the human subject may be followed by illness."

The doctors pointed out that no evidence has been presented to show that persons have contracted brucellosis from cattle vaccinated with this strain.



PHOTOGRAPH BY VICTOR KEPPLER

"Now I can swallow easily—my throat's much better"

TRACINETS®

BACITRACIN-TYROTHRICIN TROCHES WITH BENZOCAINE

Your patients will like TRACINETS because they really soothe irritated throats—taste good, besides.

Two topical antibiotics combined, bacitracin and tyrothricin, give your patients double antibacterial action, while benzocaine provides a soothing, anesthetic effect. In severe throat infections, TRACINETS conveniently supplement systemic therapy.

Quick Information: Each TRACINET contains 50 units of bacitracin, 1 mg. of tyrothricin and 5 mg. of benzocaine. Supplied in vials of 12.

CLASSIFIED ADVERTISEMENTS

Advertisements under the headings listed are published without charge for those physicians whose names appear on the MEDICAL TIMES mailing list of selected general practitioners. To all others the rate is $3.50 per insertion for 30 words or less; additional words 10c each.

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Assistants
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CLASSIFIED ADVERTISING FORMS CLOSE 15th of PRECEDING MONTH. If Box Number is desired all inquiries will be forwarded promptly. Classified Dept., MEDICAL TIMES, 676 Northern Boulevard, Great Neck, L. I., N. Y.

WANTED (Locations)

GENERAL PRACTITIONER desires location in small town with population between 5,000 and 15,000. Location must have local open-staff hospital, and must have several other physicians. Prefer mountain location. In past six years have been carrying on very successful general practice and only reason for leaving is to avoid having to spend so much time driving to and from distant hospitals. Have large family. Am capable of doing most of my own surgery. Would consider association or partnership with compatible individual but do not care to work on salary. Available most anytime. Own enough equipment to equip small clinic and be willing to share this with partner or associate. Write MEDICAL TIMES, Box 2C1.

GENERAL SURGEON—young, married, industrious Board eligible surgeon seeks relocation. Prefers South, Southwest or California. Would like to be associated with a GP or a group of them. Is able to co-invest if necessary. Draft exempt. Fully trained in a broad field including thoracic, cardiac, abdominal and traumatic surgery. Is not interested in quick initial return but wants position with a future. Write MEDICAL TIMES, Box 2C2.

FOR RENT (Homes, Sanatoria, etc.)

FOR RENT—to G.P., in beautiful new Doctors Building in Lubbock, Texas, 3 room suite of offices. Share beautifully decorated reception room with Internist and Surgeon. Also share receptionists, office and laboratory facilities. Unequipped X-Ray room available. Write to Warren B. Poole, M.D., 3020 34th Street, Lubbock, Texas.

APOTHECARY JARS

Beautiful handmade and painted jars, imported from Germany. Wide assortment of styles and sizes. Rich colors. Ideal for office decorations, lamp bases, as vases, for mantel pieces, as gifts, etc. Limited supply, so order now. For complete details write Box 2W, Medical Times.

EXPLORING BY TEST TUBE

THE PHYSICAL AND CHEMICAL properties of phenolphthalein make it possible to establish the site of its action as a laxative. Pharmacologists agree that the principal action takes place in the colon; the stomach is not affected at all. If there is any influence whatever on the small intestine, it is at the terminal portion.

PHENOLPHTHALEIN manifests its laxative action only after it is rendered in solution. When placed in gastric juice in a test tube, phenolphthalein does not dissolve, because it is not soluble in an acid medium. Consequently, it does not act in the stomach.

WHEN THE SOLVENT in the test tube is of the alkaline reaction of the small intestine (approximately pH 7.7), solution of phenolphthalein takes place very slowly, because a range of pH 10 is required for quick solution. This permits the laxative to traverse the small intestine without increasing the rate or force of peristalsis. Only when the colon is reached is the full stimulating action of the dose exerted.

THE ADVANTAGES of this "timed" action are obvious. There is no undue acceleration of gastric emptying, no interference with the digestive and absorptive processes of the small intestine to cause the elimination of unabsorbed food from the digestive tract. Having reached the colon, the gentle action of phenolphthalein produces, in four to six hours, or next morning if taken before retiring, a stool "much like the normal."*

These important considerations commend the use of Ex-Lax, the laxative that incorporates, in a chocolated base, phenolphthalein which has been biologically standardized by an exclusive process. In this way, the uniform activity of the laxative is assured, and unusual palatability is attained. There is no sudden, embarrassing urgency when Ex-Lax is used by day, and sleep is not disturbed when taken at bedtime.

The merits of Ex-Lax as an all-around laxative for all ages is recognized by an ever increasing number of physicians, who use it in their practice. Because of its pleasing taste and gentle action, they find Ex-Lax particularly suitable for use during pregnancy and for administration to children.

How well Ex-Lax may serve the needs of your practice, you can best determine by personal observation. We will be glad to send a professional trial supply, along with a physician's pocket notebook, bound in leather, containing up-to-date medical reference information.

EX-LAX, INC., BROOKLYN 17, NEW YORK

* H. Beckman: Pharmacology in Clinical Practice. W. B. Saunders Co., 1952; page 369.

MEDICAL TIMES, FEBRUARY, 1954

Advertisers' Index

In infectious and allergic rhinitis and sinusitis

Biomydrin "is effective as an antibiotic in clearing the nose of pathogenic organisms and purulent secretions. In many cases, sterile cultures were obtained after a brief period of treatment."

Antibiotics & Chemotherapy *3*:299 (March) 1953.

Improvement in 113 of 124 Patients*

Diagnosis	Number of patients	Improved
Chronic catarrhal rhinitis	11	11
Chronic allergic rhinitis	26	25
Right maxillary sinusitis	2	1
Chronic naso-pharyngeal catarrh	6	6
Chronic suppurative sinusitis	3	3
Coryza, Head cold, Catarrhal rhinitis	58	51
Influenza	2	1
Acute catarrh	4	3
Hypertrophic rhinitis	12	12
TOTAL	124	113 (91.1%)

* Eye, Ear, Nose and Throat Monthly *32*:512 (Sept.) 1953.

The Biomydrin formula

THONZONIUM BROMIDE 0.05%. Synthesized in the Nepera laboratories. Exceedingly potent antibacterial. Greatly enhances the antibiotic activity of neomycin and gramicidin. Reduces surface tension, facilitating spreading and penetrating. Mucolytic.

NEOMYCIN SULFATE 0.1%. Effective against gram-positive and gram-negative organisms.

GRAMICIDIN 0.005%. Effective against gram-positive organisms.

PHENYLEPHRINE HCl 0.25%. Widely preferred vasoconstrictor.

THONZYLAMINE HCl 1.0%. *Therapeutic concentration* of this effective antihistaminic aids in controlling local allergic manifestations.

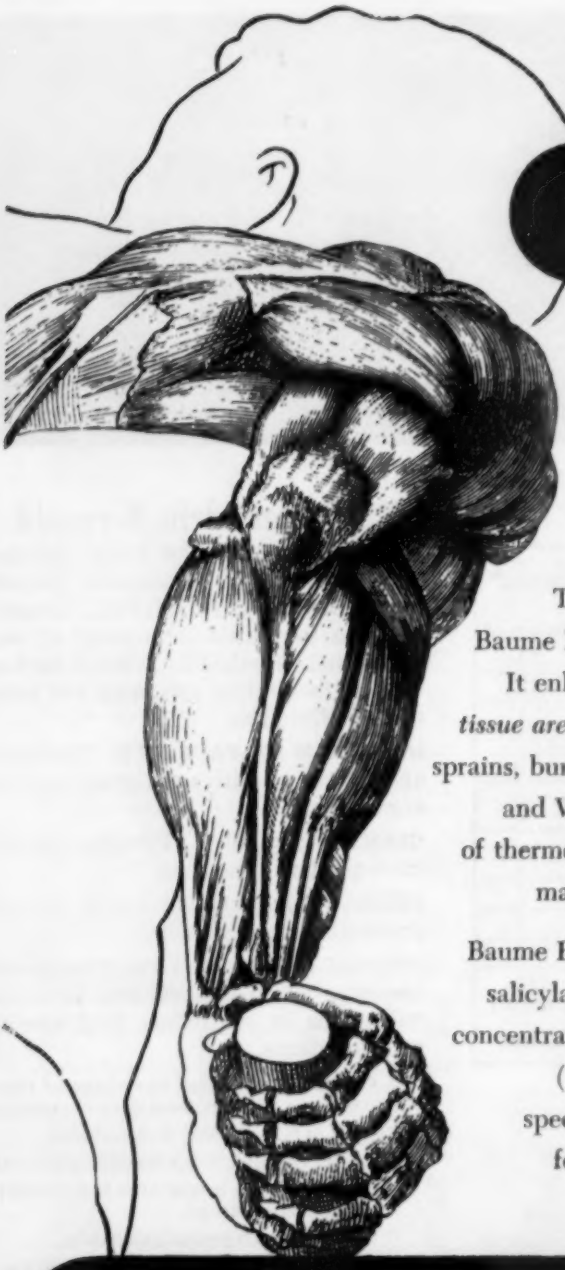
- Prompt, prolonged shrinkage of nasal mucosa without secondary congestion.
- pH is 6.2. Isotonic and buffered.
- Does not interfere with ciliary activity.
- Spray covers larger area than could be reached by drops.
- Available on prescription only.

DOSAGE: Adults—2 or 3 sprays in each nostril; 4 or 5 times a day as needed, or as directed by physician. Children—1 or 2 sprays in each nostril; 4 or 5 times a day as needed, or as directed by physician.

BIOMYDRIN

"BIOMYDRIN" AND "THONZONIUM BROMIDE" ARE TRADEMARKS OF NEPERA CHEMICAL CO., INC.

Nepera Chemical Co., Inc. Pharmaceutical Manufacturers, Yonkers 2, N. Y.



going deep

The "hyperkinemic" activity of Baume Bengué goes beneficially deep. It enhances blood flow *through the tissue area* in arthritis, myositis, muscle sprains, bursitis and arthralgia. As Lange and Weiner[1] determined by the use of thermo-needles, hyperkinemic effect may extend to a depth of 2.5 cm.

Baume Bengué also promotes systemic salicylate action. It provides the high concentration of 19.7% methyl salicylate (as well as 14.4% menthol) in a specially prepared lanolin base to foster percutaneous absorption.

Baume Bengué

ANALGESIQUE

1. Lange, K., and Weiner, D.: J. Invest. Dermat. 12:263 (May) 1949.

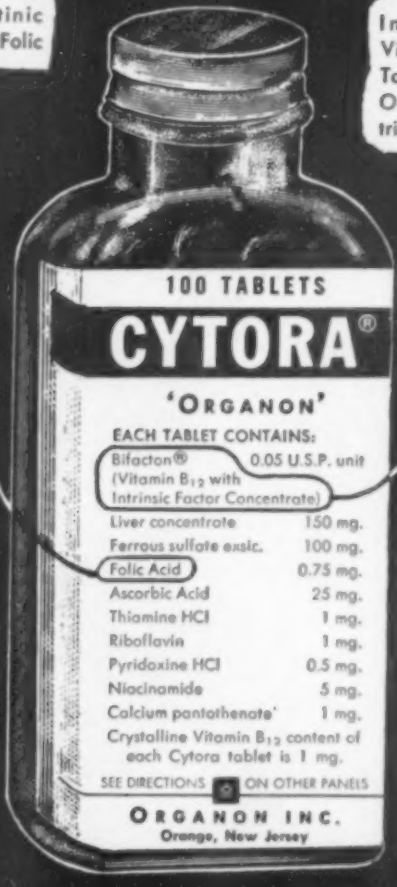
Available in both* regular *and* mild *strengths.

Thos. Leeming & Co Inc 155 E. 44th St., New York 17, N.Y.

CYTORA *is first again!!*

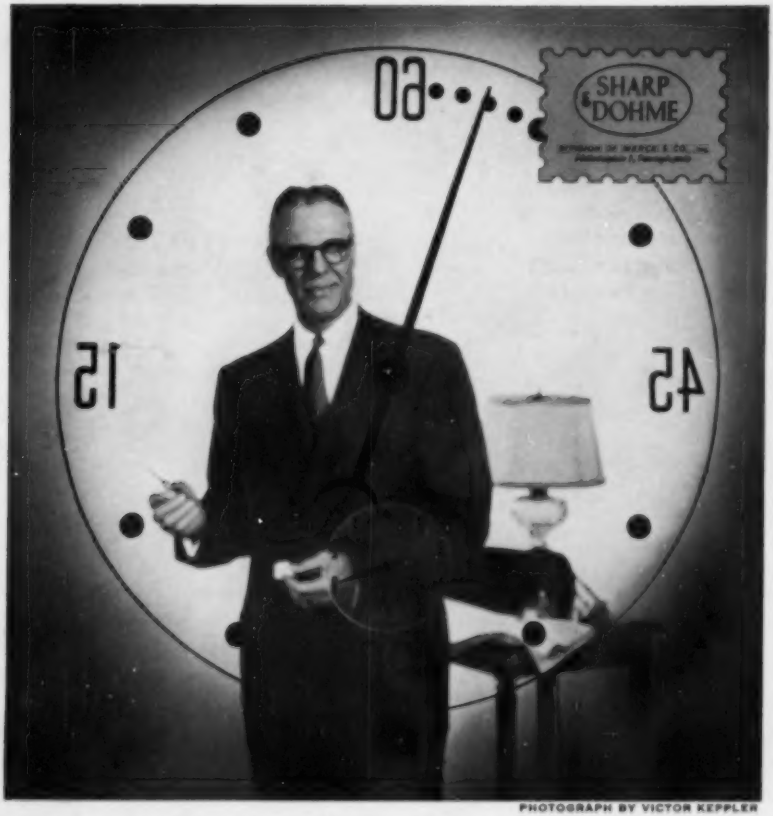
In **1947** — First Vitamin-Hematinic Tablet to Offer Folic Acid

In **1954** — First Vitamin-Hematinic Tablet to Offer the *Only* Approved Intrinsic Factor Product



Available for your prescriptions in bottles of 100, 250, and 1000.

Organon INC. • ORANGE, N. J.



PHOTOGRAPH BY VICTOR KEPPLER

Relieves smooth muscle spasm within three minutes[1]. . .

DEPROPANEX®

DEPROTEINATED PANCREATIC EXTRACT

DEPROPANEX helps bring your patient quick relief from spasmodic pain—not by dulling the senses, but by direct action on smooth muscle.[1] In a matter of minutes, DEPROPANEX relieves spasm in renal and biliary colic, dysmenorrhea, after cystoscopy and abdominal surgery.

In intermittent claudication and other angiospastic conditions, continuing treatment with DEPROPANEX restores your patient to useful living... increases his walking distance by "as much as 400%."[2]

Quick Information: DEPROPANEX is non-narcotic, non-toxic. *Dosage:* 2 to 5 cc., as indicated. *Supplied* in 10 cc. rubber-capped vials.

References: 1. South. M. J. 31:233, 1938. 2. Am. Heart J. 18:425, 1939.